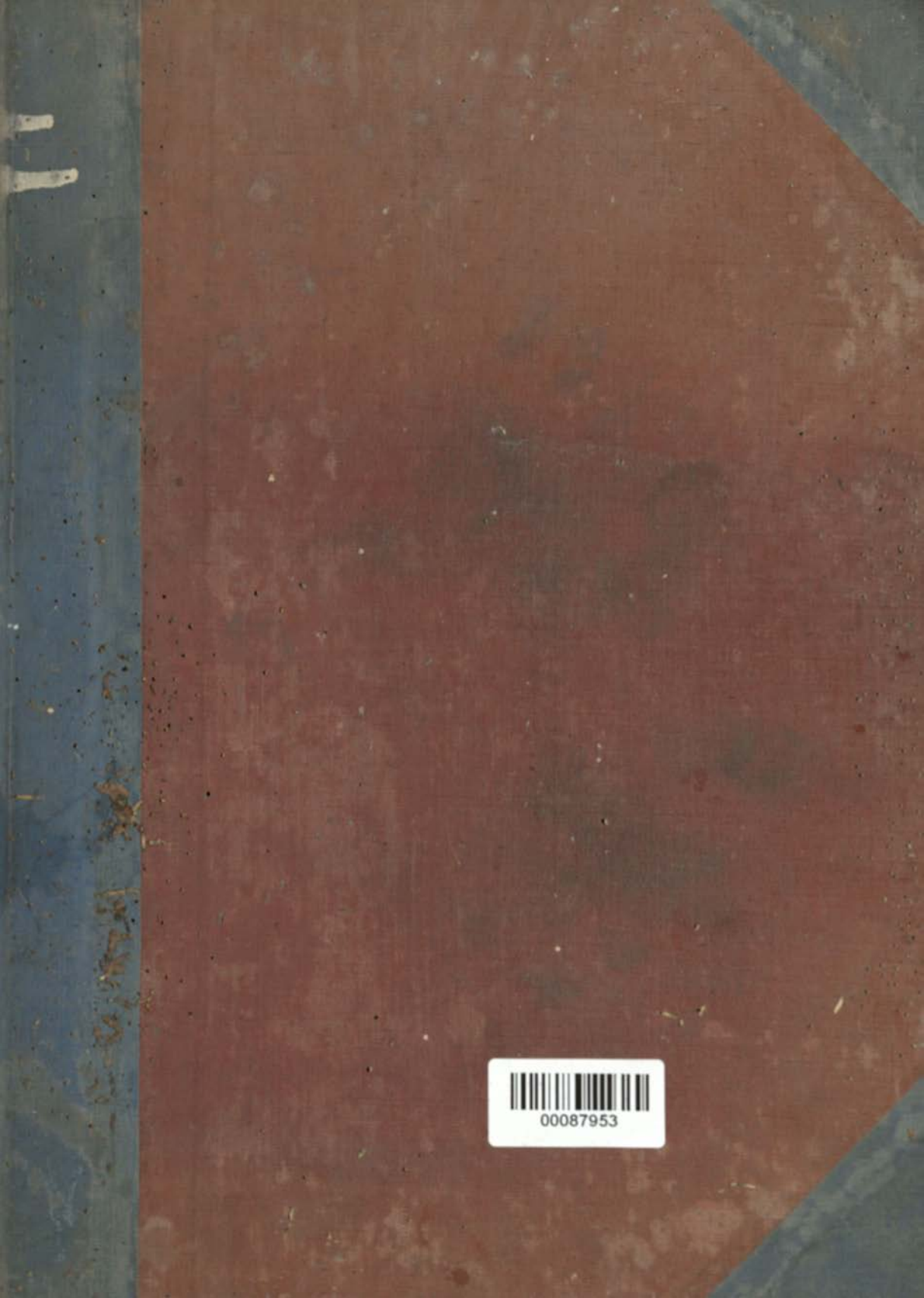
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THE

GENERA

OF

BIRDS.

VOL. I.

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THE

GENERA OF BIRDS:

COMPRISING

THEIR GENERIC CHARACTERS,

A NOTICE OF THE HABITS OF EACH GENUS,

AND

AN EXTENSIVE LIST OF SPECIES

REFERRED TO THEIR SEVERAL GENERA.

BY

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PREFACE.

It is now many years since an attempt has been made to give an outline of the state of the Science of Ornithology, in a general elementary work. In the preface to the first edition of my "List of the Genera of Birds," published in 1840, I stated that I had been for some time past occupied in drawing up the characters of the genera, the nomenclature of which I then promulgated, and that my labours on this subject might "hereafter be given to the world in a more perfect form." The form which I have now adopted is one which will, I trust, be easily understood, even by the tyro who seeks to make himself systematically acquainted with the science; but a few remarks and explanations may not be altogether unnecessary.

The system, more fully carried out in the present Work, is the same with that of which my "List of Genera" furnishes the outline. It is founded as much as possible on the similarity of habits, and on the consequent approximation of external characters of the different groups in relation to each other; and has met with considerable approbation from various authors who have referred to it. A few slight alterations will be found in the positions of a small number of genera, but none affecting the more important features of the system; and the strict law of priority has been studiously followed out in regard to the names employed, to the utmost of my knowledge and ability.

Those genera only have been taken up, which were thought to be founded on characters of sufficient importance to warrant their general adoption. This part of the Work will be seen to be fraught with innumerable difficulties, when it is considered how large a number of divisions have been proposed during the last few years; but I have endeavoured to limit myself to such an amount of subdivision as appeared to me to afford the nearest approximation to a uniform system of nomenclature. It may appear to some of my readers that I have exercised a severer scrutiny in the reduction of these subdivisions in some subfamilies than that which has been applied to others; but I think that it will generally be found that such cases occur chiefly in those subfamilies which had been subjected by some previous writer or writers to a more minute analysis in this respect, than is consistent with the uniformity of system required in a general work. On the other hand, it should be taken into consideration that the several articles were prepared in accordance with my knowledge of the species at the time of their publication; and that, with the increased number of species with which I have become acquainted during the five years that have elapsed since the commencement of the publication of the

Work, I should probably at the present moment be inclined to reduce still further the genera of a few of the subfamilies. It must also be remembered that I have endeavoured to adopt such names only as may be supposed to designate genera; those of the lower divisions or subgenera are given under the names of the species which form their type; and I have added the synonymous names of the genera as well as those of the subgenera, in the form of notes to the generic name employed.

The difficulties in the way of defining the value of a division are indeed very great, and its adoption must always depend much on individual opinion, as well as on the extent of our knowledge of species; for an isolated species often appears to form the basis of a good division when examined by itself, while the distinction vanishes at once when the bird is examined in connection with the entire mass of species forming the group to which it belongs. Genera, too, are not unfrequently established on unique specimens which are difficult of access, and have been recorded without the aid of figures to give an accurate idea of their forms; but of such I may state that there are only a very few instances in which I have not had the good fortune to obtain the means of examining either the specimens themselves or drawings made from them. Great caution is also required in dealing with genera established, as some have been, on falsified or distorted specimens, such, for instance, as *Erolia*, *Barbilanius*=*Sparactes*, *Hyreus*, *Autrochenon*, and *Anarhynchus*; to which I may add *Verrulia*, which I have recently learned is considered to have been established on a pigeon furnished with wax wattles and a false tail, for which reason it becomes necessary to blot out this genus from among the *Gourinæ*.

Great obstacles frequently occur in the way of ascertaining the true and proper (that is to say, the earliest-employed) generic names, many having been first published in Transactions, Journals, Books of Travels, and even more miscellaneous works, which have not been much examined for this purpose until of late. I may mention two examples illustrative of this difficulty, which require correction in the present Work. I had been led to suppose that *Phaleris* of M. Temminck (1820) was the oldest name for the division to which I have applied it in the body of the Work; but I have lately found that that division was proposed in the previous year (1819) by Merrem in "Ersch und Grub. Encycl." under the name of *Simorhynchus*; and I have been informed by Dr. Hartlaub (who was indebted for the information to the Prince of Wurtemburg) that the division for which I have adopted Mr. Swainson's name of *Calurus* (1837) was proposed as far back as 1801 by Pedro de la Llave, in a Mexican publication entitled "Registro trimestre," under the name of *Pharomachrus*.

Such changes with regard to generic names must continually take place until our knowledge of all that has been done by previous writers becomes registered in a general work, by means of which the information thus eventually obtained by dint of continued application cannot fail to become the foundation of that most desirable object, a uniform system of nomenclature.

The Index of Generic Names referred to in this Work will be found to extend to upwards of 2400; a greater number than has been recorded in any previous publication. Of the genera adopted (amounting

to 815) I have endeavoured to convey the characters in a short and concise manner, but I trust sufficiently detailed to embrace and circumscribe the species which they are severally presumed to comprise. The generic characters are followed by a short notice of the habits of the birds which are best known or most characteristic of the genus under which they are placed. These I have usually drawn up from the writings of other authors, but in a few instances I have been able to add some particulars derived from private information. This is a subject of the greatest interest; but unfortunately little is known of the habits of very many forms, and it is therefore to be hoped that those naturalists who have the means will not neglect the opportunity of adding such facts as may come to their knowledge regarding these species, and thus while contributing towards the history of their economy, assist at the same time in exemplifying their proper position in the general system.

Then follows an extensive List of Species, with references to the names of the older authors, and to the numerous specific descriptions that have been published within the last few years, and many of which are scattered through a multitude of publications not always easy of examination. This portion of the Work has been attended with no small amount of labour and research; and its due execution is beset with numerous sources of error, some of which it may not be improper to mention here. Thus, for instance, the undefined nature of the genus in which many of the species were placed by their original describers, their location in an improper genus, or even the imperfect nature of the description itself, frequently rendered it difficult, if not impossible, to determine to what genus, in the system employed in the present Work, many species really belonged. Again, it is not always easy, even with a very extensive knowledge of species, to define what is really to be regarded as a true species. This greatly depends on individual opinion; some ornithologists, for example, considering the allied examples found in the two hemispheres to belong to the same species; while others consider those belonging to each of these great divisions of the world to be specifically distinct; and we frequently find different states of the same bird, or even hybrids between two species, described as distinct. It is sometimes scarcely possible to clear up such difficulties by means of descriptions only, whereas a careful examination of the original specimens would generally be sufficient to enable an experienced ornithologist to determine on their right to be regarded as distinct species.

Some, too, of the species described by the older authors, from the Leverian and other museums now dispersed, have not since been recognised in other collections. Yet it is essential that they should be inserted in the list of species, inasmuch as it is probable that many, if not most, of them may again be brought to light, as has actually been the case in several recent instances. Numerous species have also been recorded, on the authority merely of drawings more or less correct; and the examination of these drawings, when practicable, has not unfrequently led to the superseding of names given by more modern writers, by those employed by the older describers. It will be found, moreover, that many descriptions, even of a modern date, are so imperfect, either from their brevity or from a laxity in the use of terms, as to be wholly insufficient for the identification of the species, which could in such cases only be arrived at by the inspection of the original specimen. Such an extent of information could only be

derived from the examination of all public and private collections; but this is evidently beyond the power of any single individual to accomplish. Much might, however, be done to further this most desirable object by the combined exertions of the curators of the principal collections of birds uniting to publish their remarks on the less known and doubtful species, described from their several collections. But even this resource would sometimes fail; as, for instance, in cases where such unique birds have disappeared from the collections in which they formerly existed, and may consequently remain for years unknown and almost forgotten, until by some lucky chance they may be rediscovered and more correctly defined, when I doubt not that they would in some instances prove to be synonymous with species more recently described. For these reasons it is obviously improper to discard species from our lists, merely because they have not been recently seen and examined, thereby casting an unwarranted doubt on the accuracy of previous writers, and leaving an opening for the redescription, as new, of old species already more or less correctly recorded in our systems.

It is hardly necessary to do more than to allude to the artifices of dealers and others, who have occasionally produced what have been regarded as new and splendid species by artificial means, which supposed species have been innocently introduced into works of science, on the writers of which the falsification has been imposed. Such forgeries require no small degree of caution to insure their rejection, and many other difficulties might be mentioned to which a full and accurate enumeration of species is exposed; but enough has been said to show both that my task has been attended with considerable labour, and that it would be unjust to hold me entirely responsible for any apparent want of correctness in the list of species which may be discovered in the monographic study of any particular group. This will more especially appear when it is considered that my researches have been extended to upwards of 8000 species, such being the number which I have considered entitled to be enumerated as species in this Work, but in which many changes will necessarily take place as they become better known; and that the entire series from which I have extracted this number of species contains about 15,000 specific names, as is shown by the Index which I have given at the end of the Work. The placing in their proper genera of this mass of specific names, and the indication at the same time of those which I regard as merely synonymous, must have at least the beneficial influence of making the literature of the science better known and more readily capable of examination by others, and thus of preventing, to a great extent, the application of further synonymous terms to birds that have been already sufficiently recorded, paving the way, as a further consequence, to a uniform system of nomenclature of the species, which might be agreed upon and adopted by the ornithologists of all nations.

I trust, therefore, that some allowance will be made for such errors as may be discovered to exist; that the difficulties with which I have had to contend will be taken into consideration; and that it will be remembered that the present is the first attempt that has been made, for many years, to collect together a list of species *from all available sources*, many of them very difficult of access and scattered through the ever increasing multitude of Transactions, Journals, and Voyages, a large portion of which have rarely been examined by ornithological writers.

A few words may be added on some additional features which I have thought it desirable to introduce into the Work. It was impossible, in the first instance, to number the pages, on account of the irregular order in which, from various causes, it was necessary that the subfamilies should be issued; but in the Table of Contents I have shown how the numbers of the pages should run with the several articles, and this paging will be found greatly to facilitate the consultation of the Work. During the five years of its progress much additional matter has been carefully collected, which is added in the Appendices, where many new species, and other information published or met with subsequently to the publication of the several articles to which they refer, will be found recorded, for the purpose of completing, as nearly as possible up to the present time, the summary of our knowledge of the species belonging to each genus. Lastly, to facilitate the finding of the names of those birds which have been figured in various standard ornithological works of large extent, I have given a series of Lists of the Names employed in this Work, with references to each plate of those works in consecutive order, which I trust may prove useful in naming collections from those great stores of published figures, by enabling the student at a glance to obtain the information he desires with regard to any particular figure.

G. R. GRAY.

Hampstead, August 20. 1849.

POSTSCRIPT BY THE ILLUSTRATOR.

It is perhaps scarcely necessary to state that the Illustrations of this Book have no claim to be considered as works of art. My constant object has been to represent, as closely as possible, those characteristic variations of form which are relied on by ornithologists as the distinctive marks of generic separation.

When I accepted the office of Secretary to the Zoological Society, and found myself no longer able to devote to the completion of this series of plates the time which the work demanded, I was fortunate enough to obtain the assistance of Mr. Wolf of Coblentz; and I have the pleasure of believing, that, as I thus secured the best available talent in Europe as a substitute for my own pencil, my friends will have no cause to regret that the latter part of the Work has been intrusted to another hand.

D. W. MITCHELL.

Montague Street, Aug. 29. 1849.

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[1] Retain that only which bears the date, "June, 1849," at the end of the article.
[2] Marked by mistake LXXXIV.
[3] Read Epimachus magnificus.

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[1] Marked Sylvicolinæ. [2] Page 318. left out by mistake. [3] Marked VII. [4] Marked LXXXVI.
[5] That bearing the date "March, 1849," at the end of the article.

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II. PASSERES *continued.*	IV. CONIROSTRES *continued.*	IV. Fringillidæ *continued.*	3. Tanagrinæ	360—367	LXXXIX.	89.
			4. Fringillinæ	368—375	XC.	90.
			5. Emberizinæ	376—379	XCI.	91.
			6. Alaudinæ	380—383	XCII.	92.
			7. Pyrrhulinæ	384—387	XCIII.	93.
			8. Loxinæ	388—389	XCIV.	94.
			9. Phytotominæ	390—391	XCV.	
		V. Colidæ	1. Colinæ	392—393	XCVI.[1]	
		VI. Musophagidæ	1. Musophaginæ	394—395	XCVII.	97.
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		VII. Bucerotidæ	1. Bucerotinæ	398—401	XCIX.	99.
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		II. Psittacidæ	1. Pezoporinæ	406—411	CI.	101. 101*a*.
			2. Arainæ	412—415	CII.	102.
			3. Lorinæ	416—419	CIII.	103.
			4. Psittacinæ	420—423	CIV.	104.
			5. Cacatuinæ	424—427	CV.	105.
		III. Picidæ	1. Capitoninæ	428—431	CVI.	106.
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			7. Yuncinæ	448—449	CXII.	
		IV. Cuculidæ	1. Indicatorinæ	450—451	CXIII.	113.
			2. Saurotherinæ	452—453	CXIV.	
			3. Coccyzinæ	454—457	CXV.	115.
			4. Crotophaginæ	458—461	CXVI.	117.
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		II. Megapodidæ	1. Talegallinæ	488—489	CXXIII.	123.
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			3. Odontophorinæ	512—515	CXXXII.	132.
			4. Tetraoninæ	516—517	CXXXIII.	133.
			5. Pteroclinæ	518—519	CXXXIV.	
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			2. Chionidinæ	522—523	CXXXVI.	
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[1] Marked XCV.

[2] Both plates marked 125.

[3] Both plates marked 126.

Order.	Suborder or Tribe.	Family.	Subfamily.	Pages.	Coloured Plates.	Plates of Details.
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VII. GRALLÆ		I. Charadriadæ	1. Œdicneminæ	534—535	CXLII.	142.
			2. Cursorinæ	536—537	CXLIII.	
			3. Glareolinæ	538—539	CXLIV.	
			4. Charadrinæ	540—545	CXLV.	145.
			5 Hæmatopodinæ	546—547	CXLVI.	147.
			6. Cinclinæ	548—549	CXLVII.	
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			2. Plectropterinæ	604—605	CLXIV.	164.
			3. Anserinæ	606—609	CLXV.	165.
			4. Cygninæ	610—611	CLXVI.	(with 163.)
			5. Anatinæ	612—619	CLXVII.	167.
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			2. Podicipinæ	632—633	CLXXII.	
			3. Heliornithinæ	634—635	CLXXIII.	(with 162.)
		III. Alcidæ	1. Alcinæ	636—637	CLXXIV.	174.
			2. Phaleridinæ	638—639	CLXXV.	
			3. Spheniscinæ	640—643	CLXXVI.	176.
			4. Urinæ	644—645	CLXXVII.	177.
		IV. Procellaridæ	1. Procellarinæ	646—649	CLXXVIII.	178.
			2. Diomedeinæ	650—651	CLXXIX.	
		V. Laridæ	1. Larinæ	652—655	CLXXX.	180.
			2. Rhynchopinæ	656—657	CLXXXI.	(with 186.)
			3. Sterninæ	658 661	CLXXXII.	182.
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[1] Both plates marked 148. [2] Marked CLII. [3] Marked CLXI. [4] Both plates marked 183.

PROVISIONAL TABLE

SHOWING THE

ARRANGEMENT OF THE ORDERS, TRIBES, FAMILIES, AND SUBFAMILIES,

AS ADOPTED IN THIS WORK.

N.B. AN ASTERISK IS PREFIXED TO THE NAMES OF THE SUBFAMILIES ALREADY PUBLISHED.

I. ACCIPITRES.

I. Accip. Diurni.

I. Vulturidæ.
- *1. Gypaetinæ - - 1
- *2. Sarcoramphinæ - - 2
- *3. Vulturinæ - - 3
- *4. Gypohierinæ - - 4

II. Falconidæ.
- *1. Polyborinæ - - 5
- *2. Buteoninæ - - 6
- *3. Aquilinæ - - 7
- *4. Falconinæ - - 8
- *5. Milvinæ - - 9
- *6. Accipitrinæ - - 10
- *7. Circinæ - - 11

II. Accip. Nocturni.

III. Strigidæ.
- *1. Surninæ - - 12
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- 1. Steatorninæ - - 16
- 2. Caprimulginæ - - 17
- 3. Podagrinæ - - 18

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- *2. Hirundininæ - - 20

III. Coraciadæ.
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- 2. Todinæ - - 22
- 3. Eurylaiminæ - - 23
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- 2. Phœthorninæ - - 36
- 3. Trochilinæ - - 37

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- 2. Meliphaginæ - - 39
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- 5. Parinæ - - 52
- 6. Mniotiltinæ - - 53
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- 2. Turdinæ - - 56
- 3. Timalinæ - - 57
- *4. Oriolinæ - - 58
- 5. Picnonotinæ - - 59

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- 2. Alectrurinæ - - 61
- 3. Tyranninæ - - 62
- 4. Tityrinæ - - 63
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- 2. Piprinæ - - 67
- 3. Ampelinæ - - 68
- 4. Campephaginæ - - 69
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V. Lanidæ.
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- *2. Thamnophilinæ - - 72

IV. Conirostres.

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- *2. Garrulinæ - - 74
- *3. Callæatinæ - - 75
- 4. Corvinæ - - 76
- 5. Gymnoderinæ - - 77
- 6. Pyrrhocoracinæ - - 78

II. Paradiseidæ.
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3. Ardeinæ - - - 150
4. Ciconinæ - - 151
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* 4. Tringinæ - - 156
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* 6. Fuligulinæ - - 168
* 7. Erismaturinæ - - 169
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3. Spheniscinæ - - 176
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* 3. Sterninæ - - 182

VI. PELECANIDÆ. 1. Phaetoninæ - - 183
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GYPAËTUS
barbatus (Linn).

C.Hullmandel's Patent Lithotint.

Order I. ACCIPITRES *Linn.**

This order embraces the Birds of Prey: they have the Bill of various length and form, more or less compressed; with the culmen suddenly hooked at the tip, and acute; the base more or less covered with a cere, in which are pierced the variously formed Nostrils; the Wings lengthened and pointed; the Feet strong, with the Tarsi moderate, generally rounded, and covered with scales of different shapes; the Toes three before and one behind, all armed with strong Claws, and their soles invariably rough.

The first Suborder,

ACCIPITRES DIURNI, or Diurnal Birds of Prey,

are distinguished from those that pursue their food in the twilight or at night, by the lateral position of their Eyes; the base of the upper mandible covered for nearly half its length with a prominent cere, in which the Nostrils are placed; the Tarsi moderate, scaled, and rarely covered with plumes.

The first Family,

VULTURIDÆ, or Vultures,

have the Bill more or less strong, compressed, with the tip hooked and acute; the Wings lengthened and pointed; the Tarsi short, rounded, and covered with reticulated scales; the Toes moderate; the middle one the longest, and longer than the Tarsi, the outer connected with the middle one by a membrane, the hind toe rather elevated, and all armed with strong obtuse Claws.

Most of the birds of this family have the head and neck more or less clothed with down in the place of feathers, and the crop is prominent, naked, or covered with woolly hairs.

* The *Raptatores* of Illiger, the *Rapaces* of M. Temminck, or the *Raptores* of Mr. Swainson.

The first Subfamily,

GYPAËTINÆ, or Bearded Vultures,

have the head and neck completely clothed with feathers, and the cere of the base of the upper mandible entirely hidden by projecting bristles.

Gypaëtus *Storr.**

Bill strong, lengthened, straight, laterally compressed, with the culmen curved to the tip, which is much hooked and acute; the nostrils oval, but entirely concealed by the projecting bristles which surround the base of the upper mandible, while a tuft of similar hairs projects forwards from beneath the gonys of the lower mandible. *Wings* lengthened, with the second and third quills nearly equal and longest. *Tail* lengthened and wedge-shaped. *Tarsi* very short, and covered by feathers. *Toes* moderate, the middle one longer than the tarsi, and the anterior ones united at the base by a membrane; the claws curved, especially those of the inner and hind toes.

The birds of the single species composing this genus inhabit the high chains of mountains of the continents of Europe, Asia, and Africa, and are generally found in pairs, but are not very common. Their usual mode of procuring the animals on which they prey, viz. goats, chamois, &c., is to attack them in such manner as to cause the affrighted animals to leap over the margins of the precipitous rocks, when they leisurely feed on the mangled bodies of those which are killed by their fall. They do not when pressed with hunger reject carrion. This species incubates on the summits of the highest mountains. The nest is four feet in diameter, flat, and formed of larch branches, intertwined with wool, goat and horse hair, and feathers, cemented together by the excrement of the bird itself. In this nest the female deposits two or three eggs.

G. *barbatus* (Linn.) Cuv. Edward's Birds, pl. 106., Pall. Zoogr. 1. 372. t. 13. — Vultur barbarus *Linn.*; Falco magnus *S. Gmel.*; Vultur niger *Gmel.*; Gypaëtus grandis *Storr*; Gyp. alpinus *Daud.*; Gyp. leucocephalus et Gyp. melanocephalus *Meyer*; Phené ossifraga *Sav.*; Gyp. meridionalis *Brehm.*; Gyp. barbatus var. occidentalis et var. orientalis *Pr. Bonap.*; Vultur aureus *Briss.*; Gyp. himalayanus *Hutt.* Journ. As. Soc. Beng.

* Established by Storr in 1784 (*Alpenreise*, p. 69.); Savigny's genus *Phene* (*Hist. d'Egypte*, 1809. *Zool.* i. 18.) is coequal.

C. Hullmandel's Patent Lithotint.

CATHARTES
californianus (Shaw).

GYPAETINÆ.

SARCORAMPHINÆ.

GYPAETUS barbatus. 2. NEOPHRON percnopterus. 3. CATHARTES foetens. 4. SARCORAMPHUS gryphus.

The second Subfamily,

SARCORAMPHINÆ, or CONDORS,

have the Bill lengthened, and rather slender, with the basal portion more or less covered with a soft Cere, the apical part strong, much curved, and acutely hooked at the tip; the Nostrils placed in the cere, with the opening large, exposed, oblong, and longitudinal; the Wings lengthened and pointed; the Tarsi long, and covered with small reticulated scales; the middle Toe lengthened; the lateral ones short, equal, and united with the middle by a membrane; and the hind Toe generally short and weak.

NEOPHRON *Sav.**

Bill very long and slender, with the cere covering two thirds of its length, the apical portion rather arched, and acutely hooked at the tip, and the sides compressed; the nostrils placed near the middle of the bill, longitudinal and exposed. *Wings* lengthened and acute, with the third quill the longest. *Tail* moderate and wedge-shaped. *Tarsi* the length of the middle toe, plumed below the knee, and covered with moderate-sized reticulated scales. *Toes* lengthened and slender, with the lateral ones nearly equal, the inner one the strongest, and all strongly scutellated above; the hind toe as long as the inner, and strong; the claws moderate, strong, and curved, especially that of the inner toe. The front of the head, cheeks, and fore part of the throat denuded of feathers.

These birds are found in Africa and India, where they live in large flocks; and in Egypt they are held in great respect, on account of the services they render to the country by purifying it from carrion, &c., on which they feed. They rarely prey on small living mammalia, birds, and reptiles; and it is on the high and inaccessible mountains that they form their nests.

1. N. *Percnopterus* (L.) Pl. enl. 407. 429.—Vultur leucocephalus et V. fuscus *Gmel.* Le Vaill. Ois. d'Afr. t. 14.; Percnopterus ægyptiacus *Steph.*; V. ginginianus *Daud.* Lath. Hist. pl. 5.; V. stercorarius *La Peyr.*; V. albus *Daud.*; V. fulvus *Bodd.*; V. meleagris *Pall.* Jard. & Selby's Ill. Orn. pl. 33.

2. N. *pileatus* (Burch.) Burch. Trav. S. Afr. 194.—Cathartes monachus *Temm.* Pl. col. 222.; N. caruneulatus *A. Smith*; Percnopterus niger *Less.*

SARCORAMPHUS *Dum.*†

Bill moderate, the base covered for above one third of its length with a soft cere, the apical part strong, arched to the acute tip, and the sides slightly compressed; the nostrils placed in the middle of the cere, large, longitudinal, and exposed. *Wings* lengthened, pointed, with the third and fourth quills equal and longest. *Tail* moderate, and even at its end. *Tarsi* rather shorter than the middle toe, plumed below the knee, and covered with very small reticulated scales. *Toes* moderate, with the lateral ones short, equal, and united with the middle by a membrane, the hind toe much shorter than the inner one and weak; the claws strong, moderate, and slightly curved. Head, neck, and front of the breast denuded of feathers; and the nostrils of the males furnished above with a caruncle.

* Established by Savigny (*Hist. de l'Egypte Zool.* i. p. 75.) in 1809. Cuvier, in 1817, proposed *Percnopterus* for the same type.

† This genus was established by Dumeril in (*Zoologie Analytique*, p. 32.) 1806; and, in 1816, Vieillot proposed *Gypagus*, which is coequal with the one used.

These birds are scattered over the most elevated mountains of the New World, from the Straits of Magellan to the South-Western States of North America. They generally live in pairs. Mr. Darwin remarks of the first species, that, "on coming suddenly to the brow of the precipice, it was a fine sight to see between twenty and thirty of these great birds start heavily from their resting-place, and wheel away in majestic circles. They moved in large curves, sweeping in circles, descending and ascending without any apparent exertion; and are oftentimes seen at a great height, soaring over a certain spot in the most graceful spires and circles." It is from these elevated peaks that they descend into the valleys and plains to seek for their food, which consists principally of carcasses of the large mammalia. When satisfied, they retire to their separate ledges to rest, and to digest their food. The second species seem to belong more especially to the plains, otherwise their habits coincide. As the summer approaches, these birds seek the most inaccessible parts of the mountains to rear their young. The female does not form any kind of nest, but deposits two large eggs on a projecting ledge of rock.

1. S. *Gryphus* (Linn.) Goldf. Naturh. Atlas t. 107., Humb. Obs. de Zool. t. 13., Pr. Bonap. Amer. Orn. iv. pl. 1., Temm. Pl. col. 133. 408. & 494. — Vultur magellanicus *Shaw's* Lev. Mus. pl. 1., Voy. de la Bonite, Ois. t. 2.

2. S. *Papa* (Linn.) Dum. Pl. enl. 428. Le Vaill. Ois. d'Afr. t. 13., Spix Av. Bras. t. 1.

Cathartes *Illig.**

Bill long, covered with a soft cere for two thirds of its length; the apical part strong and arched to the acute tip, and the sides compressed, especially at the tip; the nostrils placed in the front of the cere, large and exposed. *Wings* lengthened, pointed, with the third and fourth quills equal and longest. *Tail* moderate, even or rounded at its end. *Tarsi* shorter than the middle toe, plumed below the knee, and covered with small reticulated scales. *Toes* moderate; the lateral ones short, equal, and united with the middle one by a membrane; the hind toe very short and weak; and the claws strong, and slightly curved. Head and the upper part of the neck denuded of feathers.

These migratory birds are found scattered over various parts of the American Continent, the West Indies, and the Falkland Islands. Mr. Darwin remarks that "these vultures certainly are gregarious; for they seem to have pleasure in each other's society, and are not solely brought together by the attraction of a common prey. On a fine day, a flock may often be seen at a great height, each bird wheeling round and round in the most graceful evolutions." They feed on dead carcasses and every kind of filth during the hot season; those which inhabit the sea coasts and islands subsisting on what the sea throws up and on dead seals, &c. Small living animals, reptiles, and eggs, especially those of the alligators, also form a portion of their food. The nest is formed in a hollow tree, or carelessly placed between rocks, or even upon the ground, of a few dry leaves or feathers. The female lays two to four eggs; and the young, when hatched, are clothed in white down.

1. C. *fœtens* Illiger. — Vultur urubu *Vieill.* Ois. de l'Amér. Sept. t. 2.; Vultur iota (*Gmel.*) Wils. Amer. Orn. pl. 75. f. 2.; V. atratus *Bartr.*

2. C. *Aura* (Linn.) Illiger Ois. de l'Amér. Sept. t. 2. bis, D'Orb. Voy. dans l'Amér. Mér. Ois. t. 1. f. 1. — Vultur iota *Mol.*

3. C. *californianus* (Shaw), Shaw's Misc. pl. 301. — Cathartes vulturinus *Temm.* Pl. col. 31.

* This genus of Illiger (*Prodromus*, p. 236.) was established in 1811; and, in 1816, Vieillot proposed *Catharista*, which is coequal.

GYPS
tenuirostris. Hodg.

The third Subfamily,

VULTURINÆ, or VULTURES,

have the Bill long, strong, more elevated than broad; the sides more or less compressed; the base covered with a Cere for nearly half the length of the bill; and the tip suddenly hooked over the lower mandible; the Nostrils placed in the cere, with the opening oblique and exposed; the Wings lengthened; the Tarsi covered with small scales; and the middle Toe longer than the tarsi, while the lateral Toes are much shorter.

VULTUR *Linn.**

Bill large, much compressed and flattened on the sides; the culmen elevated and much arched from the cere to the tip, which is hooked and acute; the nostrils placed in the cere, and rather ovate. *Wings* lengthened, pointed, with the first quill short, and the third and fourth the longest. *Tail* moderate and rounded, with the shafts of each feather strong, and projecting beyond the webs. *Tarsi* feathered below the knee, and the rest covered with small reticulated scales. The middle *Toe* rather longer than the tarsi, and united to the outer by a membrane at the base; the hind toe as long as the inner one; and all covered above with strong transverse scales, and armed with slightly curved, strong, rather acute claws, especially those of the inner and hind toes.

Head covered with scattered down; the occiput generally furnished with an elevated transverse crest of closely set down; and the neck-ruff advancing upwards towards the hinder part of the head.

This genus comprehends a series of large birds which are peculiar to the warmer parts of the Old World. They are noticed speedily collecting in troops on the body of any dead animal, although they may not have been seen near the place for some time before. On such food they glut themselves until they are incapable of moving; but they will sometimes also attack living animals. Their flight is slow, but they are capable of mounting to a considerable height by means of a series of circular evolutions, which serve them not only in ascending, but also in descending. Their nest is slightly formed of sticks on the most inaccessible parts of the rocks, and the young are nourished by the parents vomiting a portion of their own food.

1. V. *monachus* Linn. Edward's Birds, pl. 290.—Vultur cinereus *Gmel.* Pl. enl. 425.; Vultur arrianus *Temm.*; Ægypius niger *Sav.* Hist. de l'Egypte, Ois. t. 11.

2. V. *imperialis* Temm. Pl. col. 426.

3. V. *occipitalis* Burch. Trav. S. Afr. ii. 329., Rüpp. Atlas, t. 22.—Vultur galericulatus *Temm.* Pl. col. 13., Le Vaill. Ois. d'Afr. t. 12.

* Adopted by Linnæus (*Systema Naturæ*) in 1756, from Mœhring who published it in 1752. *Ægypius* of Savigny, established in 1809, is coequal.

Otogyps.*

Characters in common with Vultur ; but the head and neck are bare of feathers or down, and the sides of the latter are furnished with lengthened wattles from beneath each ear.

1. O. *auricularis* (Daud.) Le Vaill. Ois. d'Afr. t. 9. — Vultur ægyptius *Temm.* Pl. col. 407.; Vultur nubicus *Ham. Smith,* Griff. An. Kingd. pl.

2. O. *calvus* (Scop.) Sonn. Voy. Ind. t. 104. — Vultur pontecerianus *Gmel.* Pl. col. 2., Ann. du Mus. 1. t. 20.

Gyps *Sav.*†

Bill lengthened, with the culmen gradually hooked to the tip and rounded; the sides rather swollen; the nostrils oblong-ovate and oblique. The other characters are like those of Vultur; but the head and neck are clothed with short down, and the nape ornamented with a ruff of lanceolate feathers or of lengthened downy feathers.

1. G. *fulvus* (Gmel.) Pl. enl. 426. — Vultur leucocephalus *Meyer;* Vultur Percnopterus *Pall.;* Vultur Kolbii *Daud.,* Le Vaill. Ois. d'Afr. t. 10., Rüpp. Atlas, t. 32.; Gyps vulgaris *Savig.;* Vultur indicus *Temm.* Pl. col. 26.

2. G. *bengalensis* (Gmel.) Lath. Syn. pl. 1. (young), Gray, Ill. Ind. Zool. pl. . — Vultur Chaugoun *Daud.* Le Vaill. Ois. d'Afr. t. 11. (adult); Vultur leuconotus *Gray,* Ill. Ind. Zool. pl. .; ? Vultur indicus *Scop.* Sonn. Voy. Ind. t. 105.

3. G. *tenuirostris* (Hodgs.).

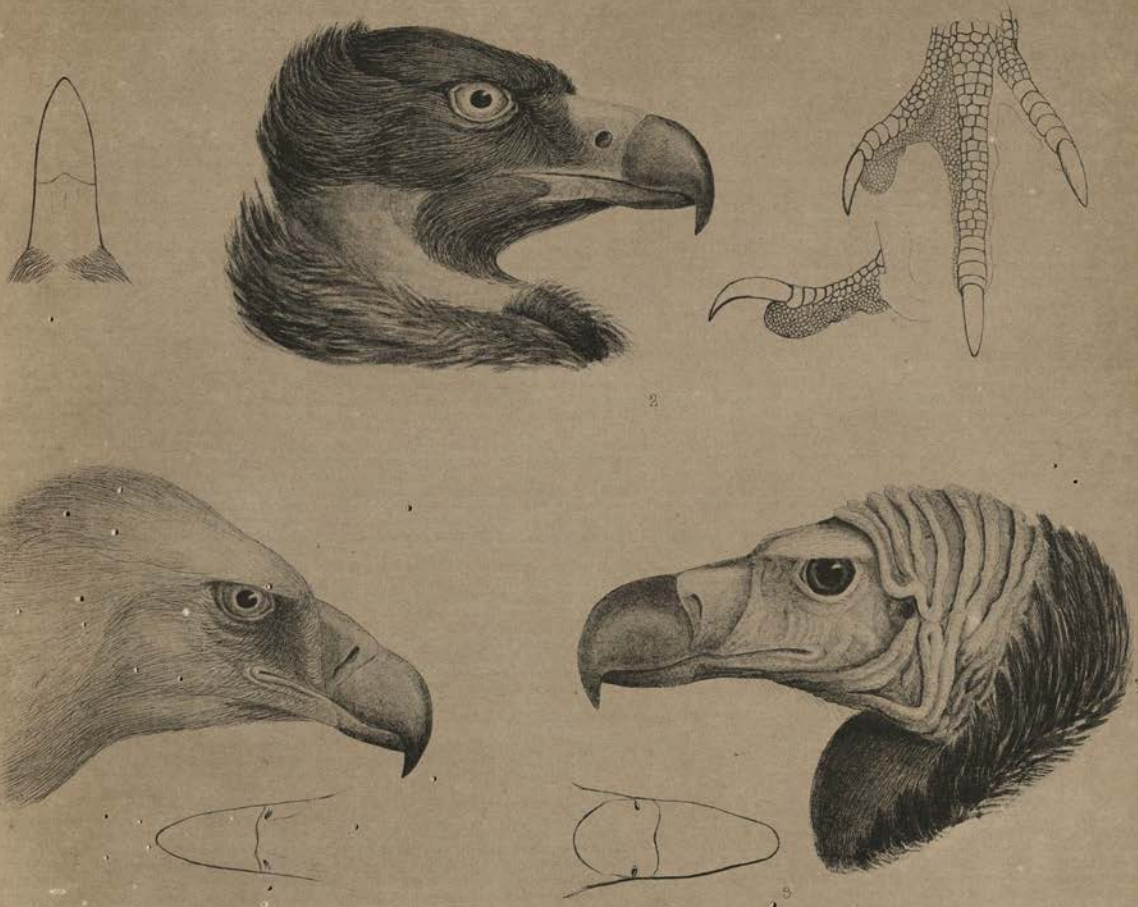
* Proposed in 1841 (*List of Gen. of Birds,* p. 2.).

† Established by Savigny (*Hist. de l'Egypte, Zool.* 1. 71.) in 1809.

June, 1844.

GYPHIERAX
angolensis (Gm.)

VULTURINÆ.



1. GYPS fulvus. 2. VULTUR cinereus. 3. OTOGYPS auricularis.

GYPHIERACINÆ.

C. Hullmandel's Patent Lithotint.

GYPHIERAX angolensis.

The fourth Subfamily,

GYPOHIERACINÆ, or EAGLE-VULTURES,

have the Bill lengthened, much compressed on the sides, and the base covered with a Cere for one third of the length of the bill; the Wings lengthened and pointed; and the Tarsi covered with rather large reticulated scales.

GYPOHIERAX *Rüpp.**

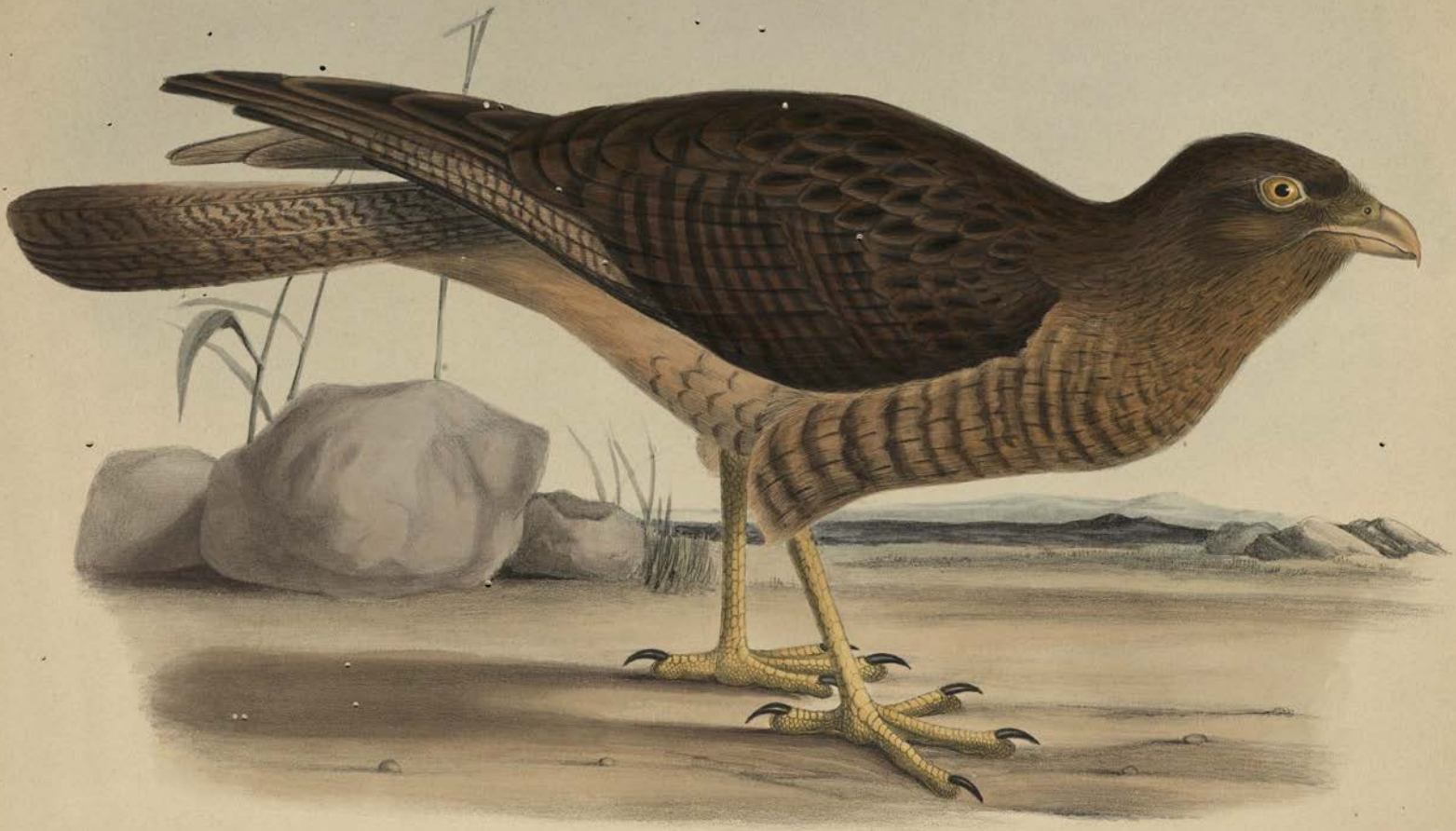
Bill lengthened, much compressed on the sides, the base of the upper mandible covered with a cere for one third of the length of the bill, the culmen slightly arched and curved to the tip, which is acute; the nostrils exposed, placed in front of the cere, with the openings oblique and sub-ovate. *Wings* lengthened and pointed, with the third and fourth quills the longest. *Tail* rather short and rounded. *Tarsi* as long as the middle toe, robust, feathered below the knee, and the rest covered with large reticulated scales. *Toes* rather long, strong, and much scutellated, the lateral ones unequal, and the hind toe as long as the inner, both being armed with strong powerful claws. The *Lores*, the space round each eye, and two longitudinal stripes below the lower mandible, denuded of feathers.

The type of this genus is supposed to be peculiar to Western Africa, but its habits are, from its rarity, at present unknown.

G. *angolensis* (Gmel.) Rüpp. Shaw, Lev. Mus. pl. p. 153. — Polyborus ? hypoleucus *Benn.* Jard. & Selby's Ill. Orn. n. s. pl. 13.

* The above generic name was proposed by Dr. Rüppell in (*Faun. Abyss. Vog.* p. 45.) 1835; and Mr. Gray's *Racama* of 1840 is coequal.

* *Juv*, 1844.



C.Hullmandel's Patent Lithotint.

MILVAGO
chimango (Vieill.)

The second Family,

FALCONIDÆ, or Falcons,

have the Bill partly covered at the base by a cere, compressed on the sides, and the culmen curved from the cere to the tip, which is hooked and acute; the lateral margins either toothed or festooned; the Wings long and pointed; the Tail moderate and broad; the Tarsi and Toes of various lengths and strong; and the Claws long, curved, and acute, especially those of the inner and hind toes. The head and neck are covered with feathers, and the eyes placed laterally, deeply sunk, and protected by a bony brow.

The first Subfamily,

POLYBORINÆ, or Caraçaras,

have the Bill compressed on the sides, slightly hooked at the tip, and the lateral margins slightly festooned; the Wings long, with the third to the fifth quills the longest; the Tarsi long, slender, and covered with irregular scales; the Toes moderate and strongly scaled above, and all armed with strong acute claws.

Ibycter *Vieill.**

Bill moderate, slender, with the culmen gradually curved to the tip, which is slightly hooked, the sides much compressed, the lateral margins slightly sinuated; the nostrils lateral, placed in the fore part of the cere, large, and more or less rounded. *Wings* long, pointed, with the fourth quill the longest. *Tail* lengthened, broad, and rounded at the end. *Tarsi* about the length of the middle toe, feathered below the knee, covered with large irregular scales in front, and with small ones behind and on the sides. *Toes* lengthened, strongly scaled above, the inner stronger and shorter than the outer, and all armed with long curved claws. The lores, sides of the head, and throat, denuded of feathers.

The species are peculiar to the warmer parts of South America. Scarcely any thing is known with certainty of their habits; except that one of them has been stated by Sonnini to feed on berries, seeds, fruits, and insects, and, further, to reside in the solitary forests, living in troops in company with Toucans.

1. I. *aquilinus* (Gmel.) Pl. enl. 417. — Falco formosus *Lath.*; F. nudicollis *Daud.*; Ibycter leucogaster *Vieill.* Gal. des Oiseaux, t. 6.
2. I. *ater* (Vieill.) Vieill. Analyse, p. 68., Gal. des Ois. t. 5.—Daptrius aterrimus *Temm.* Pl. col. 37?342.; Type of Daptrius *Vieill.* (1816).
3. I. *fasciatus* (Spix), Spix Av. Bras. t. 4. — Gymnops strigilatus *Spix*, Av. Bras. t. 4. a.

Milvago *Spix.*†

Bill moderate, the culmen gradually curved to the tip, which is slightly hooked, the sides much compressed, and the lateral margins sinuated; the nostrils exposed, rounded, with an elevated bony tubercle

* Established by Vieillot (*Analyse*, p. 22.) in 1816, along with *Daptrius* which is coequal; as is also *Gymnops* of Spix (*Av. Bras.*), 1824.

† Spix in 1824 (*Av. Bras.* 1. p. 12.) established this genus, for which three other names have been proposed, viz. *Phalcobænus* of MM. Lafr. et D'Orb. (*Syst. Av.*), 1837; *Parasifalco* of M. Lesson, 1837; and *Senex* of Mr. Gray, 1839.

in the centre. *Wings* lengthened, pointed, with the third and fourth quills the longest. *Tail* lengthened, broad, and rounded at its end. *Tarsi* longer than the middle toe, feathered slightly below the knee, and covered with irregular scales, those of the front the largest. *Toes* moderate, strongly scaled above, with the lateral ones nearly equal, and the claws strong and curved, especially those of the inner and hind toes. The lores slightly covered with hairs.

These birds are peculiar to South America and the adjacent islands, and those of the Antarctic Seas. Some of the species seek the mountains, and others are found on the plains. They are generally seen on the ground or perched on large stones or walls, being rarely observed on the trees. Their flight is heavy and indolent, and they do not soar, but only fly from place to place. On the ground they are very active, running with great quickness, in the manner of a gallinaceous bird. Their food consists of carrion, worms, larvæ of insects, and even the roots of plants. Some frequent the sea-shore and the borders of lakes and swamps, seeking for small fish. They are sometimes seen in small parties attacking other birds or animals, especially those that are in a sickly state. After they have taken their food, their naked craws are largely protruded, in the manner of those of the vultures.

1. M. *chimachima* (Vieill.) N. Dict. d'Hist. Nat. v. 259. — Milvago ochrocephalus *Spix*, Av. Bras. t. 5., Jard. & Selby's Ill. Orn. t. 2.; Falco degener *Ill.*; Falco crotophagus *Pr. Max.*

2. M. *chimango* (Vieill.) N. Dict. d'Hist. Nat. v. 260. — Aquila pezoporos *Meyen*, Nov. Act. &c. 1834. 82. t. 6.

3. M. *leucurus* (Forst.) Forst. Icon. ined. t. 34. — Falco Novæ Zealandiæ *Gmel.* Pl. col. 192. 224.; Falco australis *Lath.* Jard. & Selby's Ill. Orn. n. s. t. 5.; Circaëtus antarcticus *Less.*; Type of Senex *Gray* (1839).

4. M. *albogularis* (Gould), Proc. Z. S. 1837. 9., Voy. of Beagle, Zool. pl. 1.

5. M. *montanus* (D'Orb.) Voy. de l'Amér Mér. t. 2. — Aquila megaloptera *Meyen*, Nov. Act. &c. 1834. 64. t. 7.; Type of Phalcobænus *Lafr. & D'Orb.* (1837).

Polyborus *Vieill.**

Bill short, the culmen much elevated at the base, and much arched to the tip, which is slightly hooked, the sides much compressed, and the lateral margins slightly sinuated near the tip; the nostrils oblong, oval, oblique, and placed in the upper anterior angle of the cere. *Wings* lengthened, pointed, with the third quill the longest. *Tail* moderate, broad, and slightly rounded at the end. *Tarsi* lengthened, longer than the middle toe, covered in front and behind with large irregular scales, which are divided in their middle, and on the sides with small ones. *Toes* moderate, the outer rather shorter than the inner, and all covered with strong transverse scales; the claws strong and slightly curved, those of the inner and hind toes the largest. The lores and cere slightly covered with a few scattered hairs.

The type is common throughout South America, being found from Florida to the southern extremity as far as Cape Horn. Its flight is slow and heavy, and it seldom soars in the air. It runs, however, rather quickly along the ground. They are generally seen seated in parties quietly on the ground waiting their share of the carcass, on which the Turkey Buzzards have commenced their feast. It is in the neighbourhood of the slaughtering-houses on the River Plata that they are most common, where they feed on the offals of the animals killed. Worms and insects also form a portion of their food; and, further, they are stated to attack young lambs and birds in small parties. After they have taken their food, the craw protrudes and is naked. They build, either in a low cliff, in a bush, or on the tops of lofty trees, a large coarse nest, formed of sticks, almost flat, and lined with hairs; and lay two eggs.

P. *brasiliensis* (Gmel.) Swains. Zool. Ill. n. s. pl. — Polyborus vulgaris *Vieill.* Gal. des Ois. t. 7., Spix, Av. Bras. t. 3.; Falco cheriway *Jacq.*; Vultur plancus *Lath.*; Falco tharus *Mol.*

* Established by Vieillot (*Analyse*, p. 22.) in 1816. Cuvier's *Caracara* (1817) is coequal.

ARCHIBUTEO
ferrugineus (Licht.) *regalis* G. R. Gray

1. IBYCTER ater 2. POLYBORUS brasiliensis 3. MILVAGO chimachima.

BUTEONINÆ.

1. ARCHIBUTEO lagopus 2. BUTEO vulgaris

C.Hullmandel's Patent Lithotint.

The second Subfamily,

BUTEONINÆ, or BUZZARDS,

have the Bill short, broad at the base, with the culmen much curved to the tip, which is acute, and the lateral margins festooned; the cere covering more than the basal half of the bill; the Wings long, with the third and fourth quills generally the longest; the Tarsi lengthened, generally naked, and covered both in front and behind with broad transverse scales; and the Toes, including the hind one, rather short.

BUTEO *Cuv.**

Bill short, broad at the base, laterally compressed to the tip, with the culmen much curved from the base, which is broad, and rather flattened above; the lateral margins festooned; the nostrils large, oval; and the lores clothed with hairy feathers. *Wings* very long, with the third and fourth quills the longest, and the inner and outer webs of some of the quills obliquely notched. *Tail* moderate, and even at its end. *Tarsi* lengthened, naked, covered with transverse scales before and behind; but at the apex and on the sides with small scales. *Toes* rather short, with the three anterior ones united at their base; the hind toe equal in length with the inner, and both strong, and armed with a long powerful curved claw; the base of the toes covered with small scales, and the apex with broad transverse ones.

These birds have a heavy and indolent appearance, and generally inhabit woods and forests, being found in most parts of the world. Their flight, which is sometimes performed during twilight, is easy and buoyant; and is generally taken in extensive sweeps, over meadows and marshes, near the surface of the ground. Small birds, quadrupeds, and reptiles form their food, which they either seize while flying, or strike upon the ground from the top of a tree or hillock from whence they have been watching. They breed in woods, though sometimes on rocks and the sides of deep ravines, forming their nests of sticks, lined with wool, hay, &c., and occasionally occupy the nests of other birds. The eggs are two or three in number.

1. B. *vulgaris* Bechst. Pl. enl. 419. — Falco buteo *Linn.*; F. glaucopis *Merr.*; F. variegatus, F. versicolor, F. cinereus, et F. obsoletus *Gmel.*; Buteo mutans, et B. fasciatus *Vieill.*; Accipiter buteo *Pall.*; F. pogana *Savi*; B. vulgaris japonicus *Temm. & Schl.*; Fauna Japon. t. 6. ?, Gould, B. of Eur. i. pl. 14.; Buteo capensis *Temm. & Schl.*

2. B. *rufinus* (Rüpp.) Kaup, Fauna Abyss. t. 7. — Buteo canescens *Hodgs.*; B. longipes *Jerd.*; B. rufiventris *Jerd.*

3. B. *jackal* (Daud.) Cuv. Levaill. Ois. d'Afr. t. 16.

4. B. *augur* Rüpp. Fauna Abyss. t. 16. — Falco hydrophilus *Rüpp.*, Fauna Abyss. t. 17.

5. B. *pluvipes* Hodgs. Sport. Mag. Beng. 1836. p. 182.

6. B. *borealis* (Gmel.) Vieill. Wils. Amer. Orn. pl. 52. f. 1, 2. — Falco Leverianus *Gmel.*; F. ferrugineocauda *Vieill.*; Buteo americanus et B. fulvus *Vieill.*; F. jamaicensis *Gmel.*; Accipiter ruficaudus *Vieill.*; B. vulgaris *Richard. & Sw.*; B. Swainsoni *Pr. Bonap.*; B. montanus *Nutt.*; B. ventralis *Gould*; F. Harlani *Audub.* B. of Amer. pl. 86., Vieill. Ois. de l'Amér. Sept. t. 6.

* This division was established by Cuvier (*Anatomie Comparée*) in 1799 or 1800; and it embraces Mr. Gould's genus *Craxirex* (1838), *Pœciopternis* (1847), *Tachytriorchis* (1845), *Gypsoictinia* (1845), and *Leucopternis* (1847) of Dr. Kaup.

bis 14. Fauna Bor. Amer. pl. 27., Audub. B. of Amer. pl. 372.; Type of Pœcilopternis *Kaup* (1847).

7. B. *lineatus* (Gmel.) Vieill., Wils. Amer. Orn. pl. 53. f. 3. — Falco hyemalis *Wils.* Amer. Orn. pl. 35, f. 1.; Buteo fuscus *Vieill.* Ois. de l'Amér. t. 5.?; F. buteoïdes *Nutt.* Audub. B. of Amer. pl. 56.

8. B. *pennsylvanicus* (Wils.) Pr. Bonap, Wils. Amer. Orn. pl. 54. f. 1. — Falco latissimus *Ord*; Sparvius platypterus *Vieill.*; F. Wilsoni *Pr. Bonap.* Audub. B. of Amér. pl. 91.

9. B. *erythronotus* (King), G. R. Gray, Zool. Journ. iii. p. 424. —Buteo tricolor *D'Orb. & Lafr.* Voy. dans l'Amér. Mér. Ois. t. 3.; B. varius *Gould*; Aquila braccata *Meyen*, Nova Acta &c., (1833) t. 8.?; B. unicolor *D'Orb. & Lafr.* Azara, No. 10.

10. B. *pterocles* (Temm.) Cuv. Pl. col. 56. 139.—Buteo nigricollis et B. albicaudatus *Vieill.*; Spizaetus leucurus *Vieill.*; B. albicauda *Less.* Tr. d'Orn. t. 15. f. 2.; Type of Tachytriorchis *Kaup* (1845).

11. B. *albonotatus* G. R. Gray, Isis, 1847. p. 399.

12 B. *galapagoensis* Gould, Proc. Z. S. 1837. p. 9., Voy. of the Beagle, Birds, pl. 2. - Type of Craxirex *Gould* (1838).

13. B. *melanosternon* Gould, Proc. Z. S. 1840. p. 162., B. of Austr. i. pl. 20. — Type of Gypoictinia *Kaup* (1845).

14. B. *melanops* (Lath.) Pl. col. 105. — Type of Leucopternis *Kaup* (1847).

15. B. *albicollis* (Lath.) — Falco picatus *Shaw.*

16. B. *lacernulatus* (Temm.) Pl. col. 437. — Falco scotopterus *Pr. Max.*

17. B. *polionotus* G. R. Gray, Isis, 1847. p. 212. — Buteo melanotus *Vieill.*?

18. B. *Ghiesbreghtii* Dubus, Esquis. Ornith. t. i.

19. B. *pœcilonotus* Cuv. Pl. col 9.

20.? B. *brachyurus* Vieill. Ency. Méth. p. 1223.

Archibuteo *Brehm.**

Characters in common with Buteo; but the *Tarsi* lengthened, and clothed with short feathers to the base of the toes.

1. A. *lagopus* (Brün.) Gould, B. of Eur. pl. 15.—Falco plumipes *Daud.* Levaill. Ois. d'Afr. t. 18.; F. sclavonicus *Lath.*; F. pennatus *Cuv.*; Archibuteo planiceps et A. alticeps *Brehm*; Butaetus buteo *Less.*; B. Lessonii *Smith.*

2. A. *Sancti Johannis* (Gmel.) — Falco niger *Wils.* Amer. Orn. pl. 53. f. 1, 2.; F. lagopus *Wils.* Amer. Orn. pl. 33. f. 1.; Buteo ater *Vieill.*; F. spadiceus *Forst.*; F. novæ terræ *Gmel.* Audub. B. of Amer. pl. 166. 422., Rich. Fauna Bor. Amer. pl. 28.

3. A. *ferrugineus* (Licht.) Berl. Trans. 1832. p. 428. — Archibuteo regalis *G. R. Gray*; Lagopus ferrugineus *Fras.*; Buteo Sancti Johannis *Kaup.*

4. A. *strophiatus* (Hodgs.) — Falco asiaticus *Lath.*?; Buteo leucocephalus et B. aquilinus *Hodgs.*; F. hemilasius *Temm. & Schl.* Fauna Japon. Aves, p. 18. t. 7.?; Type of Butaquila *Hodgs.* (1844).

5. A. *hemiptilopus* Blyth, Journ. A. S. B. 1845. p. 1. — Archibuteo cryptogenys *Hodgs.* Calc. Journ. Nat. Hist. 1847. p. 96. pl. 3. f. 1.?; A. griseogenys *Bl.*?

* M. Brehm proposed this division in (*Isis*, p. 1269.) 1828; Dr. Kaup in 1829, under the name of *Triorchis*; and M. Lesson in 1831, as *Butaetes*; all founded on the same type. It includes *Butaquila* of Mr. Hodgson (1844).

FALCO IMBER TESTIMONIUM

C. Hullmandel's Patent Lithotint

CIRCAETUS
holospilus (Vig.)

1. AQUILA Chrysaetos. 2. SPIZAETUS ornatus. 3. THRASAETUS harpyia. 4. CACHINNA Sepulchrorum. 5. FALCINUS haliaetus.

6. MORPHNUS occipitalis. 7. CIRCAETUS gallicus. 8. HALIAETUS albicilla. 9. HYPOGNATHUS melanoleucus. 10. HALIASTUR Girrenera. 11. MILVAGO milvulus.

The third Subfamily,

AQUILINÆ, or EAGLES,

have the Bill moderate, the culmen elevated and straight at the base, and then much arched to the tip, which is hooked and acute; the sides much compressed, and the lateral margins more or less festooned; the Nostrils placed in front of the cere, large, and generally oval; the Wings lengthened and acute, with the third, fourth, and fifth quills usually the longest; the Tail long, ample, and mostly rounded at the end; the Tarsi long, clothed with feathers to the base of the toes, or naked and covered with variously formed scales; the Toes long, strong, united at the base, especially the outer, and the lateral toes unequal both in length and strength, the inner being the strongest; the claws long, strong, much curved and acute, that of the inner toe the strongest.

AQUILA *Mœhr.**

Bill strong, straight at the base, and with the apical portion of the culmen much curved to the tip, which is greatly hooked and acute; the sides much compressed, and the lateral margins festooned; the nostrils placed in the cere, large, and rather oblique. *Wings* lengthened and acute, with the fourth and fifth quills equal and longest. *Tail* long and wedge-shaped, or rounded at the end. *Tarsi* rather longer than the middle toe, robust, and entirely clothed to the base of the toes with feathers. *Toes* moderate, strong, lateral ones unequal, and all armed with strong, curved, acute claws; the inner the strongest.

These noble birds are scattered in most parts of the world, regardless of temperature, but preferring the mountainous districts. They usually soar to a great height in the air, from whence they generally seek for prey, and it is from such elevations that they pounce upon their victims. They are sometimes observed sailing along at no great height above the woody valleys, ravines, and alpine declivities of the mountains, as well as the cultivated land. They may also frequently be seen seated on a rock, patiently awaiting the approach of some quadruped or bird upon which they can prey. Lizards, insects, and even carrion, at times form a portion of their food. Their flight is easy, and is usually performed in high circuitous sweeps. The nest is composed of sticks, heath, &c., covering a large space of ground, and is generally placed upon a projecting part of an inaccessible cliff, or on the summit of a large tree. The eggs are generally two in number.

1. A. *chrysaëtos* (Linn.) Pall. Pl. enl. 410.— Falco fulvus *Linn.* Pl. enl. 409.; F. niger *Gmel.*; F. canadensis *Linn.* Wils. Amer. Orn. pl. 55. f. 1.; F. americanus *Gmel.*; F. melanaëtus *Linn.*; F. melanonotus *Lath.* Brown's Ill. pl. 2.; F. albus *Gmel.*; Aquila nobilis *Pall.*; Aq. regia *Bess.*; F. cygneus *Lath.*

2. A. *heliaca* Sav. Hist. de l'Egypt, Ois. t. 12. — Falco imperialis *Bechst.* Pl. col. 151, 152., Gould's B. of Eur. pl. 5.; F. Mogilnik *Gmel.*; Aquila chrysaëtos *Leisl.*

3. ? A. *bifasciata* Gray, Ill. Ind. Zool. pl. 17.

4. A. *nævia* (Gmel.) Mey. Hist. de l'Egypt, Ois. t. 1. et t. 2. f. 1. — Falco maculatus *Gmel.*; Aquila melanaëtos *Sav.*; Aq. clanga *Pall.*; Aq. bifasciata *Hornsch.*

5. A. *fulvescens* Gray, Ill. Ind. Zool. pl. 29. — Aquila fusca et Aq. punctata *Gray*, Ill. Ind. Zool. pl. 27. 16.; Aq. Vindhiana *Frankl.*

6. A. *nævioïdes* (Cuv.)— Falco rapax *Temm.* Pl. col. 455.; F. Cheka *Smith*; F. obsoletus *Licht.*?

7. A. *albicans* (Rüpp.) Faun. Abyss. t. 13.

* Established by Mœhring in 1752. It embraces *Uroaëtus*, *Hieraaëtus*, *Pteroaëtus*, of M. Kaup (1844), and *Neopus* of Mr. Hodgson (1844). This latter is coequal with *Onichaaëtos* of M. Kaup, which was published in the same year.

8. A. *senegallus* (Cuv.) Reg. Anim. 1. p. 327.

9. A. *Bonellii* (Temm.) Pr. Bonap. Pl. col. 288. — Aquila intermedia *Bonelli*; Aq. fasciata *Vieill*; Nisaëtus grandis *Hodgs.*

10. ? A. *morphnoïdes* Gould, Proc. Z. S. 1840. 161., B. of Aus. pl.

11. A. *pennata* (Gmel.) Cuv. Pl. col. 33. — Aquila minuta *Brehm.*; Spizaëtus milvoïdes *Jerd.*; the Type of Hieraëtus *Kaup* (1844).

12. A. *bellicola* (Daud.) Vieill. Le Vaill. Ois. d'Afr. t. 1. — Falco armiger *Shaw*, Smith, Ill. S. Afr. Zool. pl. 42.

13. A. *coronata* (Linn.) Edwards's Birds, pl. 224., Smith, Ill. S. Afr. Zool. pl. 41.

14. A. *vulturina* (Daud.) Le Vaill. Ois. d'Afr. t. 6. — Aquila Verreauxii *Less.* Cent. Zool. t. 38.; Gypaëtus cafer *Temm.*; Falco niger *James.*; the Type of Pteroaëtus *Kaup* (1844).

15. A. *malayensis* (Reinw.) Pl. col. 117. — Aquila pernigra *Hodgs.*; Nisaëtos ? ovivorus *Jerd.*; the Type of Neopus *Hodgs.* (1844).

16. A. *audax* (Lath.) G. R. Gray, Lamb. Icon. ined. 1. 43., Collins's N. S. Wales ii. pl. p. 287. — Falco fuscosus *Cuv.* Reg. An. t. 3. f. 1., Pl. col. 32.; Aquila albirostris *Vieill.*; the Type of Uroaëtus *Kaup* (1844).

Spizaëtus *Vieill.**

Bill moderate, the culmen straight at the base, and much arched to the tip, which is hooked and acute; the sides much compressed, and the lateral margins festooned; the nostrils large and rather rounded. *Wings* moderate, reaching to half the length of the tail, with the fourth and fifth quills equal and longest. *Tail* long, and slightly rounded at the end. *Tarsi* slender, much longer than the middle toe, and plumed to the base of the toes. *Toes* long, strong, the inner one much longer than the outer, which is united to the middle one by a membrane; all covered above with small scales, except at the apex where there are a few transverse ones; and each toe armed with a long, strong, curved, and acute claw.

These birds are inhabitants of South America, Africa, and especially India and its archipelago. They are usually seen in the jungles and wooded districts, seated on an elevated branch, from whence they pounce on the game that passes near, such as pheasants, partridges, hares, &c. They, however, occasionally pursue with energy on the wing.

1. S. *ornatus* (Daud.) Vieill. Le Vaill. Ois. d'Afr. pl. 26. — Falco superbus et F. coronatus *Shaw*; F. Mauduytii *Daud.*; Harpyia braccata *Spix*, Av. Bras. t. 3.; Falco fastuosus *Shaw.*

2. S. *Tyrannus* (Pr. Max.) Pl. col. 73.

3. S. *fuscus* Vieill. Ency. Méth. 1258.

4. S. *occipitalis* (Daud.) Vieill. Le Vaill. Ois. d'Afr. t. 2. — Falco senegalensis *Daud.*

5. S. *albescens* (Shaw), Vieill. Le Vaill. Ois. d'Afr. t. 3.

6. S. *atricapillus* (Cuv.) Pl. col. 79. — The Type of Spizastur *Less.* (1837).

7. S. *limnaëtus* (Horsf.) Linn. Trans. xiii. 138., Pl. col. 134. — Limnaëtus Horsfieldii *Vigors.*

8. S. *caligatus* (Raffl.) Linn. Trans. xiii. 278. — Falco niveus *Temm.* Pl. col. 127.; Nisaëtos pallidus *Hodgs.*; N. niveus *Jerd.* Ill. Ind. Orn. 1. pl. 1.

9. S. *crístatéllus* (Temm.) Pl. col. 282. — Falco indicus cirrhatus *Ray*; Nisaëtus nipalensis *Hodgs.*

10. S. *pulcher* (Hodgs.) Journ. As. Soc. Beng. 1836. 229., 1837. 361.

11. S. *Kieneri* (Gerv.) Mag. de Zool. 1835. Ois. t. 35. — Spizaëtos albogularis *Blyth.*

12. S. *hastatus* (Less.) Voy. de Belang. Zool. p. 217.

13. S. ? *ceylonensis* (Gmel.) — Falco niveus *Shaw.*

Morphnus *Cuv.*†

Bill long, culmen at the base nearly straight, and then arched to the tip, which is hooked and acute; the sides compressed, and the lateral margins festooned; the nostrils large and rather rounded. *Wings* long, reaching for more than half of the length of the tail, with the third, fourth, and fifth quills the

* Vieillot established this genus in his *Analyse*, p. 24., in 1816. *Plumipeda* of Dr. Fleming (1822), *Limnaëtus* of Vigors (1830), and *Nisaëtus* of Mr. Hodgson (1836) are coequal, and I believe that *Spizastur* of M. Lesson (1837) also forms a part of this division.

† The late Baron Cuvier established this division in the *Règne Animal*, i. p. 329., in 1817. It is coequal with M. Lesson's *Urubitinga* (1837), M. Kaup's *Spizogeranus* (1844), and with M. Cabanis's *Hypomorphinus* (1844).

longest. *Tail* long and nearly even. *Tarsi* lengthened, nearly twice the length of the middle toe, covered in front and posteriorly with transverse scales, and on the sides with small irregular scales. *Toes* moderate, strong, and covered above with transverse scales, except at the base; the claws strong, curved, and acute.

They are peculiar to South America, where they usually reside in the immense forests that border the lakes and rivers, and are generally perched on the high branches of dead trees, when on the look out for their prey, which principally consists of reptiles, and occasionally of small quadrupeds, dead birds, and perhaps fish. If they observe one of these within a short distance, they dart upon it from their lofty station. They prefer, however, the lower branches to take their rest.

1. M. *Urubitinga* (Gmel.) Cuv.—Aquila picta *Spix*, Av. Bras. t. 1., Pl. col. 55.; Pandion fulvus *Vieill.*

2. M. *buson* (Shaw), Le Vaill. Ois. d'Afr. t. 21. — Buteogallus cathartoïdes *Less.*

3. M. *guianensis* (Daud.) Less. Tr. d'Orn. t. 11. f. 2. — Spizaëtus variegatus *Vieill.*; Morphnus cristatus *Less.*; Falco Sonninii *Shaw.*

Thrasaëtus.*

Bill long, very strong, culmen at the base straight, and then suddenly curved at the tip, which is hooked and acute; the nostrils rather linear, and longitudinally transverse. *Wings* moderate, reaching beyond the base of the tail, with the fourth, fifth, and sixth quills the longest. *Tail* long, broad, and slightly rounded. *Tarsi* short, very thick, covered in front with large scales, and on the sides with small scales. *Toes* long, very robust, and covered above with large transverse scales, except at the base, where they are small.

The type is found only in the great inundated or humid forests of Intertropical America, especially those that border the great rivers. In the morning it may be noticed flying over the dense forests, seeking among the branches for the monkeys and sloths on which it more especially preys, though it does not refuse other kinds of quadrupeds or birds when they fall in its way. When at rest they perch on the lower branches of the trees.

T. *Harpyia* (Linn.) — Falco destructor *Temm.* Pl. col. 14.; Harpyia destructor *Cuv.*; Falco imperialis, F. Calquin, et F. regalis *Shaw*; F. Jacquini et F. cristatus ? *Gmel.*; F. Caracca *Shaw*; H. ferox *Less.*; H. maxima *Vieill.*

Cachinna *Flem.*†

Bill very short, suddenly arched from the base to the tip, which is hooked and acute; the sides compressed, the lateral margins festooned, and the gonys curved upwards; the nostrils large and rounded. *Wings* moderate, with the third, fourth, and fifth quills equal and longest. *Tail* lengthened and much rounded. *Tarsi* longer than the middle toe, strong, and entirely reticulated. *Toes* moderate, covered at the tips with two or three large scales, and the remaining part with small scales.

This singular form is peculiar to South America, where it inhabits the borders of marshes, preying on reptiles and fish.

C. *herpetotheres* — Falco cachinnans, *Linn.* Gal. des Ois. t. 19., Spix, Av. Bras. t. 3. a.

* This division was originally established with the name of *Harpyia* by Vieillot (1816); but that word having been employed for a genus of Mammalia, I changed it to the above name in 1837.

† Established by Dr. Fleming (*Phil. of Zool.* ii. p. 236.) (1822). It is coequal with *Herpetotheres* of Vieillot (1825), and *Macagua* of M. Lesson (1837).

Circaëtus *Vieill.**

Bill moderate, culmen at the base straight, and much curved to the tip, which is hooked and acute, the lateral margins festooned; the nostrils large, oblique, and suboval. *Wings* lengthened and acute, with the third and fourth quills equal and longest. *Tail* long and even. *Tarsi* much longer than the middle toe, feathered below the knee, and entirely reticulated. *Toes* short, strong, and covered with small scales, except at the tips; the outer united to the middle by a membrane; the claws long, curved, and acute.

The species that compose this genus are inhabitants of most parts of the four quarters of the globe. They frequent the woody districts, the open plains, or banks of rivers, and marshy places, over which they are usually seen flying near the ground. Sometimes they perform lofty flights, or may be observed perched on the branch of a high tree, watching patiently for their prey, upon which they pounce when sufficiently near. They feed chiefly on reptiles, and occasionally on small quadrupeds. The nest is placed in a hole of the rock, or on the ground, and often upon lofty trees. It is composed of leaves, moss, and heath; the female deposits three eggs.

1. C. *gallicus* (Gmel.) Boie, Pl. enl. 418. — Falco brachydactylus *Temm.*; F. leucopsis *Bechst.*; F. longipes *Nils.*; Aquila leucamphomma *Borkh.*; Aq. pygargus *Briss.*

2. ? C. *hypoleucos* (Pall.) Keys. et Bl., Pall. Zoogr. 1. 354. — Accipiter ferox *Gmel.*

3. C. *thoracicus* Cuv. — Circaëtus pectoralis *A. Smith*; Aquila undulata *Licht.* ?

4. C. *cinereus* Vieill. Gal. des Ois. t. 12.

5. C. *coronatus* (Vieill.) Cuv. Pl. col. 234. — The Type of Harpyhaliaëtus *Lafr.* (1842).

6. C. *solitarius* Tschudi, Faun. Peruv. p. 4.

7. C. *bacha* (Daud.) Le Vaill. Ois. d'Afr. t. 15. — Falco bibo *Horsf.*; Falco albidus *Cuv.* Temm. Pl. col. 19.; Buteo melanotis *Jerd.*

8. C. *undulatus* (Vigors), Proc. Z. S. 1831. 170., Gould, Cent. of Birds, pl. 1. — Circaëtus nipalensis *Hodgs.*; the Type of Hæmatornis *Vigors* (1831).

9. C. *holospilus* (Vigors), Proc. Z. S. 1831. 96.

Pandion *Sav.*†

Bill short, culmen curved from the base to the tip, which is hooked and acute; the sides compressed, and the lateral margins slightly festooned; the nostrils moderate, sublinear, and rather oblique. *Wings* reaching to the tip of the tail, with the second and third quills equal and longest. *Tail* moderate and rather even. *Tarsi* short, very strong, and entirely covered with reticulated scales. *Toes* long, much padded beneath, and united at the base to the middle toe, mostly covered above with small scales; the claws very long, much curved, and rounded beneath.

These birds are equally scattered over every part of the world, but it is only in the vicinity of lakes, rivers, or pools, which abound with fish, that they take up their abode. The manner of capturing their prey is by closing their wings, and darting on it when the fish is swimming near the surface of the water. Their slender form is admirably adapted to this mode of catching, and their strong feet enable them to seize with a firm grasp their scaly and slippery prey, which sometimes exceeds their own weight, by which means the birds occasionally get drowned. Their flight is heavy, but easy, performed either in a straight line or in circles high in the air, suddenly turning, apparently without the least exertion, and rarely moving the wings. "The nest is generally placed on the top," says Wilson, "of a decayed tree. It is composed entirely of large sticks, from half an inch to an inch and a half in diameter and two or three feet in

* It was in the *Analyse* (1816, p. 23.) that Vieillot established this genus. It embraces *Hæmatornis* of Vigors (1831). This word was changed by me, as it had been previously used by Mr. Swainson, to *Spilornis*. I now consider them synonymous with the one adopted. It also includes *Harpyhaliaëtus* of Baron de Lafresnaye (1842).

† In 1809, Savigny established this genus in the *Description de l'Égypte, Zool.* p. 95.

length, piled to the height of four or five feet, and from two to three feet in breadth; these are intermixed with straw, sea-weed, and pieces of wet turf, in large quantities, and lined with dry sea-grass. These materials are so well put together, as often to adhere in large fragments, after being blown down by the wind." The female lays commonly three eggs, sometimes only two, and rarely exceeds four in number.

1. P. *Haliaëtus* (Linn.) Cuv. Pl. enl. 414.— Pandion fluviatilis *Sav.*; Falco arundinaceus *Gmel.* Gould, B. of Europ. pl. 12.; F. carolinensis *Gmel.*, Catesby's Carol. pl. 2.; F. Haliaëtus *Wils.* Amer. Orn. pl. 37. f. 1.; F. cayanensis *Gmel.*; Aquila piscatrix *Vieill.*; Pandion americanus *Vieill.* Gal. des Ois. t. 11.

2. P. *leucocephalus* Gould, Syn. B. of Austr. pl. (head), Proc. Z. S. 1837. 138., B. of Austr. pl.

3. P. *humilis* Mull. Verh. over de Natur. Gesch. der. Nederl. No. 5. t. 6.

Haliaëtus *Sav.**

Bill large, culmen straight at the base, and curved to the tip, which is hooked and acute, the sides compressed, the lateral margins slightly festooned, and the lores naked; the nostrils moderate, linear, and oblique. *Wings* lengthened and acute, with the third, fourth, and fifth quills nearly equal and longest. *Tail* moderate and rounded. *Tarsi* short, strong, covered in front with transverse narrow scales, and with small irregular ones posteriorly and on the sides. *Toes* long, mostly covered above with transverse scales; the claws long, curved, and acute.

These large and powerful birds inhabit both the Old and New Worlds, and are usually found in the mountainous districts near the sea, or on the precipices that border the inland lakes. Fishes form their principal food, which they pounce upon while swimming near the surface. They also prey on deer and aquatic birds, and even freely feed on carrion. When seeking their prey, they are usually seen sailing high and majestically in the air. The female generally places the nest in a projection of an inaccessible cliff, or on the top of a lofty tree. It is usually built of large sticks, some of them several feet in length, within which are laid sods of earth, sedge, grass, dry weeds, &c., piled sometimes to the height of five or six feet, by more than four in breadth. The eggs are mostly two in number.

1. H. *albicilla* (Linn.) Pall. Pl. enl. 112. 415. — Falco albicaudus, F. ossifragus, et F. melanaëtos *Gmel.*; Haliaëtus nisus *Sav.* Kittl. Kupf. der Vog. t. 2. f. 2., Gould, B. of Eur. pl. 10.

2. H. *pelagicus* (Pall.) Kittl. Kupf. der Vog. t. 2. f. 1. — Falco leucopterus *Temm.* Pl. col. 489.; the Type of Thalassoaëtus *Kaup* (1844).

3. H. *leucocephalus* (Linn.) Sav. Pl. enl. 411. — Falco pygargus *Daud.* Wils. Amer. Orn. pl. 36.; F. ossifragus *Wils.* Amer. Orn. pl. 55. f. 2.; Aquila albicilla *Pall.*

4. H. *Washingtoni* (Aud.) Pr. Bonap., Audub. B. of Amer. pl. 11.

5. H. *vocifer* (Daud.) Cuv. Le Vaill. Ois. d'Afr. t. 4.

6. H. *Macei* (Temm.) Cuv. Pl. col. 8. 223. — Haliaëtus fulviventer *Vieill.*; Haliaëtus albicilla *Vigors & Horsf.*; H. (Cuncuma) albipes *Hodgs.*; H. lineatus et H. unicolor *Gray*, Ill. Ind. Zool. t. 18, 19.?

7. H. *milvoïdes* (Spix), Spix, Av. Bras. t. 1. d.

8. H. *maritimus* (Wurm.).

9. H. *sinensis* (Gmel.) Lath. Syn. 1. pl. 3.

10. H. *dimidiatus* (Raffl.) Vigors & Horsf. Linn. Trans. xiii. 277.

Pontoaëtus *Kaup.*†

The characters of Haliaëtus, except that the *Tarsi* are covered in front with narrow transverse scales, posteriorly with large irregularly placed scales, and on the inner side with small ones. *Toes* almost entirely covered above with transverse scales.

* Savigny also established this genus in 1809 (*Description de l'Egypt, Zool.* p. 85.). *Cuncuma* of Mr. Hodgson (18) and *Thalassoaëtus* of M. Kaup (1844) are coequal.

† This division was originally established under the name of *Ichthyaëtus* by the Baron de Lafresnaye in 1839, but that word having been previously used in 1829, I have adopted the term of M. Kaup, who published it in 1844. It includes *Geranoaëtus* of M. Kaup (1844).

The species of this genus are found in India, its archipelago, Australia, and South America. They are generally noticed in the neighbourhood of the sea or inland lakes, over which they fly at a great elevation, seeking their prey, which chiefly consists of fish. Their flight at first, after rising, is heavy, but when once fairly on the wing easy and powerful, rising to a great height by large and graceful sweeps.

1. P. *ichthyaëtus* (Horsf.) Linn. Trans. xiii. 136., Res. Zool. pl. 5. — Haliaëtus plumbeus *Hodgs.*
2. P. *leucoryphos* (Pall.) Pall. Itin. 1. app. n. 5.
3. P. *nanus* (Blyth), Journ. As. Soc. Beng. 1842. 202.
4. P. *blagrus* (Daud.) Le Vaill. Ois. d'Afr. t. 5.
5. P. *leucogaster* Gmel. Pl. col. 49. — F. albicilla var. *Lath.*; Haliaëtus sphenurus *Gould*; Ichthyaëtus cultrunguis *Blyth*, Gould, B. of Austr. pl.
6. P. *melanoleucus* (Vieill.) N. Dict. Hist. Nat. xxxii. 32., Azara No. 8. — Falco aguia *Temm.* Pl. col. 302.; Haliaëtus leucurus *Vieill.* Azara No. 10.; the Type of Geranoaëtus *Kaup* (1844).

Helotarsus *Smith.**

The characters in common with Haliaëtus; but the *Tail* is exceedingly short and truncated. *Tarsi* short, covered entirely with small scales, those posteriorly the largest. *Toes* long, the bases of all covered with small scales, and the tips with transverse ones.

This singular-looking bird is peculiar to Southern Africa, where it is usually seen in pairs, feeding on all sorts of carrion, and will attack young antelopes and weakly sheep. It possesses a remarkable habit of flapping its wings whilst in the air, so as to be heard at a great distance.

H. *ecaudatus* (Shaw); Le Vaill. Ois. d'Afr. t. 7, 8. — Helotarsus typus *A. Smith.*

Haliastur *Selby.*†

Most of the characters are similar to those of Haliaëtus; but the *Tarsi* are covered in front with large obliquely placed scales, posteriorly with large irregular scales, and the sides with small ones.

Australia and the continent of India are the countries of the few species of this genus. They are much on the wing, sailing in the neighbourhood of water, at a moderate height, seeking various kinds of prey, as fish, reptiles, crabs, birds, and even carrion, which they pounce upon in the same manner as the birds of the foregoing genera. The typical species has been observed to seize insects off trees or standing grain; these, and its food generally, if not heavy, it often devours in the air.

1. H. *indus* (Bodd.) Pl. enl. 416. — Falco pondicerianus *Gmel.*; Haliaëtus girrenera *Vieill.*; H. garuda *Less.*
2. H. *leucosternus* (Gould), Proc. Z. S. 1837. 138., Gould, B. of Austr. pl. — Falco ponticerianus *Shaw*, Nat. Misc. pl. 389.
3. H. *sphenurus* (Vieill.) Gould, B. of Austr. pl., Vieill. Gal. des Ois. t. 15. — Haliaëtus canorus *Vig. & Horsf.*

* Dr. Andrew Smith established this genus in April, 1830; while, in November of the same year, M. Lesson proposed *Terathopius* for the same type.

† Established by Mr. Selby (1840) in his *Catalogue of the Generic and Subgeneric Types*, &c. p. 3. *Ictinaëtus* of M. Kaup (1844) is synonymous.

C. Hullmandel & Patent Lithotrit.

FALCO
subniger (G. R. Gray)

1 FALCO peregrinus 2. HYPOTRIORCHIS subbuteo 3. TINNUNCULUS alaudarius
4 IERACIDEA berigora 5. HARPAGUS bidentatus 6. IERAX coerulescens.

The fourth Subfamily,

FALCONINÆ, or FALCONS,

have the Bill short, the culmen curved from the base to the tip, which is more or less furnished on the sides with teeth; the Cere covering the nostrils, sometimes rounded, and sometimes long and linear; the Wings lengthened and pointed, with the second and third quills generally the longest; the Tail lengthened, and more or less rounded; the Feet of various sizes; and the Toes usually long and slender.

FALCO *Linn.**

Bill short, strong, with the culmen much arched from the base to the tip, which is acute; the sides compressed, the lateral margins strongly toothed near the tip; the nostrils placed in a short cere, naked and rounded, with a central tubercle. *Wings* lengthened and acute, with the second and third quills the longest, and the first and second notched near the tip. *Tail* long and rounded. *Tarsi* short, strong, covered with small irregular scales, and the tibial feathers covering the knee. *Toes* lengthened and strong, the lateral ones unequal; the hind toe long, armed, as well as the inner, with a strong hooked acute claw.

The species of this genus are scattered throughout the world, in the open country, on rocky hills, and in deep valleys, quite regardless of the climate. Some of them are migratory, which may be caused in some measure by the movements of the birds on which they prey. Their flight is powerful and exceedingly rapid; but the usual way in which they strike down their prey is by hovering over it, and then performing a sudden perpendicular dart upon it. They prey principally on birds. Some of their nests are placed upon the shelf of a rock, others on lofty trees, and they deposit three or four eggs.

1. F. *Gyrfalco* Linn. Pl. enl. 210., Pall. Zoogr. t. 3. — Falco islandicus *Brün.*; F. candicans *Gmel.* Pl. enl. 446. 462.; F. groenlandicus *Hanc.*; Type of Hierofalco *Cuv.* (1817).

2. F. *lanarius* Linn. — Falco sacer *Briss.* Orn. t. t. 14.; F. albicans *Lath.*; F. stellaris *Briss.*

3. ? F. *Cherrug* Gray, Ill. Ind. Zool. pl. 25.

4. F. *peregrinus* Linn. Pl. enl. 430. 421. 470. 469., Pall. Zoogr. t. 4, 5. — Falco abietinus *Bechst.*; F. barbarus *Linn.*; F. communis *Briss.*; F. hornoticus et F. ater *Gmel.*; F. calidus *Lath.*; F. lunulatus *Daud.*; F. anatum *Pr. Bonap.*; F. peregrinus *Wils.* Amer. Orn. pl. 76.

5. F. *peregrinator* Sundev. Physiogr. Sellsk. Tidsk. 1836. p. 38. — Falco shaheen *Jerd.* Madr. Journ. Lit. & Sci. xxix., Ill. of Indian Ornith. pl. xii.

6. F. *melanogenys* Gould, Proc. Z. S. 1837. 139., Birds of Austr. pl. — Falco macropus *Swains.*

7. F. *hypoleucus* Gould, Proc. Z. S. 1840. 162., Birds of Austr. pl.

8. F. *Jugger* Gray, Ill. Ind. Zool. pl. 26. — Falco Lugger *Jerd.*

9. F. *peregrinoides* Temm. Pl. col. 479.

10. F. *biarmicus* Temm. Pl. col. 324. — Falco chiquerôides *A. Smith.*

11. F. *subniger* G. R. Gray, Ann. of Nat. Hist. 1842. p. 371.

12. F. *deiroleucus* Temm. Pl. col. 348. — Falco aurantius *Lath.* ?

13. ? F. *fvontalis* Daud. Le Vaill. Ois. d'Afr. t. 28. — Falco galericulatus *Shaw*; F. piscator *Gmel.*?; Type of Ichthierax *Kaup* (1844).

* Linnæus established this genus in 1735. Nitzsch, in 1840, proposed *Rhynchodon*; and it embraces *Hierofalco* of Cuvier (1817), and probably *Ichthierax* of M. Kaup (1844).

HYPOTRIORCHIS *Boie.**

The characters in common with Falco. But the *Tarsi* more or less lengthened, somewhat slender, and covered in front with large hexagonal scales. *Toes* very long and slender.

They prefer wooded and cultivated places in various parts of the world, and are generally migratory. Their power of flight is remarkable, and can be sustained for a length of time. Small birds, especially larks, fall a prey to the facility and rapidity of their attacks, and the precision of their aim. It is stated of one species, that it follows the flocks of migratory birds, in the rear or on the flanks of which they are often observed hovering, picking up the weak, the wounded, or stragglers, and frequently making a sudden and fatal sweep into the midst of their multitudes. Their nests are placed on trees or in rocks, wherein the female deposits from three to five eggs.

1. H. *Subbuteo* (Linn.) Boie, Pl. enl. 432. — Falco Barletta *Daud.*; F. pinetarius *Shaw* ?
2. H. *eleoronæ* (Gené), Pr. Bonap. Faun. Ital. Aves, t. 1.
3. H. *severus* (Horsf.) Linn. Trans. xiii. 135. — F. rufipedoïdes *M'Clell*; Falco Aldrovandi *Reinw.* Pl. col. 128.; F. guttatus *G. R. Gray.*
4. H. *frontatus* (Gould), Proc. Z. S. 1837. 139., Birds of Austr. pl. — Falco lunulatus *Lath.* ? ex Lamb. Icon. ined. 11.; F. longipennis *Swains.*
5. H. *rufigularis* (Daud.) Tr. d'Ornith. ii. p. 131. — Falco aurantius var. *Lath.*; F. thoracicus *Donov.* Nat. Repos. pl. 45.; F. cucullatus *Swains.*
6. H. *concolor* (Temm.) Pl. col. 330., Birds of W. Afr. 1. pl. 3. — Falco ardosiacus *Vieill.*
7. H. *tibialis* (Daud.) Tr. d'Ornith. ii. p. 120., Le Vaill. Ois. d'Afr. t. 29.
8. H. *arcadicus* (Linderm.) Isis, 1843. 330. t. 1.
9. H. *Chicquera* (Shaw), Le Vaill. Ois. d'Afr. t. 30., Gould's Cent. of Birds, pl. 2. — Falco ruficollis *Swains.*; F. cirrhatus var. *Lath.*
10. H. *Æsalon* (Gmel.) Pl. enl. 447. 468. Pall. Zoogr. t. 7. — Falco Lithofalco *Gmel.*; F. cæsius *Meyer*; F. Regulus *Pall.*; F. sibiricus *Shaw*; F. intermixtus *Daud.*; Type of Æsalon *Kaup* (1829).
11. H. *columbarius* (Linn.) Wils. Amer. Orn. pl. 15. f. 3. — Falco temerarius *Audub.*; F. Æsalon *Swains. & Rich.* Faun. Bor. Amer. pl. 25.; Accipiter carolinensis *Briss.*; Æsalon aurillarum *Briss.*
12. H. *Novæ Zealandiæ* (Gmel.) — Falco Harpe *Forst.*, Desc. Anim. p. 68, 69. et Icon. ined. 36, 37, 38.; F. brunneus *Gould*; F. australis *Homb. & Jacq.* Voy. au Pole Sud, Ois. t. 1. f. 1.
13. H. *femoralis* (Temm.) Pl. col. 343. 121. — Falco aurantius var. *Lath.*
14. H. *semitorquatus* (A. Smith), Ill. Zool. S. Afr. Birds, pl. 1.

IERACIDEA *Gould.*†

Bill like Falco. But the *Wings* are moderate, with the second and third quills nearly equal and longest. *Tarsi* lengthened, rather slender, and covered in front with large hexagonal scales. The *Toes* rather short and strong, the lateral ones equal, and the hind toe rather short; the claws moderately robust.

The type is peculiar to Australia; and Mr. Gould informs us that it "takes much of the habits and actions of the true kestrils, particularly in the mode in which it hovers in the air; it also often soars and skulks about after the manner of the harriers. Although it sometimes captures and preys upon birds and small quadrupeds, its principal food consists of carrion, reptiles, and insects;" the crops of several that Mr. Gould dissected were literally crammed with the latter kind of food. It is generally to be met with in pairs, but at those seasons when hordes of caterpillars infest the newly sprung herbage, it congregates in flocks of many hundreds. The nest is composed outwards of sticks, and lined with strips of stringy bark, leaves, &c. The female deposits therein two eggs."

1. I. *berigora* (Vig. & Horsf.) Gould, Linn. Trans. xv. 184., B. of Austr. pl.
2. I. *occidentalis* Gould, Proc. Z. S. 1844. p. 105.

* Established by M. Boie (*Isis*) in 1826. It contains *Æsalon* of Kaup (1829).
† Mr. Gould established this division in the *Proc. Z. S.* for 1837 p. 140.

TINNUNCULUS *Vieill.**

The forms agree with those of Falco. But the *Tarsi* are more or less lengthened, strong, and covered in front with large transverse hexagonal scales. *Toes* moderate and strong.

The birds of this division are found in various localities of the globe. They possess a peculiar gracefulness of flight, which is rather irregular, occasionally suspending themselves in the air, hovering over a particular spot for a minute or two, by means of an almost invisible quivering motion of the wings, and then shooting off in another direction. Small birds, mice, and lizards form the principal food of these birds: but, in summer, they are said to hunt cockchafers, of which they seize one in each claw and eat them whilst flying; and Wilson observes that, when grasshoppers are plentiful, they form a considerable part of the food of the American species. The nest is composed of a few sticks loosely put together, and is placed on a rock or in a hollow tree. The eggs are from four to six in number.

1. T. *alaudarius* (Briss.) G. R. Gray, Pl. enl. 401. 471. — Falco Tinnunculus *Linn.*; Falco brunneus *Bechst.*; Falco fasciatus *Retz.*
2. ? T. *gracilis* (Less.) Tr. d'Orn. 93.
3. T. *interstinctus* (M'Clell.) Proc. Z. S. 1839. 154.
4. T. *rupicolus* (Daud.) Le Vaill. Ois. d'Afr. t. 35. — Falco capensis *Shaw.*
5. T. *rupicoloides* (A. Smith).
6. T. *punctatus* (Cuv.) Pl. col. 45.
7. T. *Cenchris* (Naum.) Pr. Bonap. Vieill. Faun. Franc. t. 36. — Falco tinnunculoides *Natt.*; Falco tinnuncularius *Vieill.*; Falco Naumannii *Fisch.*; Falco xanthonyx *Natt.*; Type of Tichornis *Kaup* (1844).
8. F. *cenchroïdes* (Vig. & Horsf.) Linn. Tr. xiii, 183., Gould's Birds of Austr. pl.
9. F. ——? Homb. et Jacq. Voy. au Pole Sud, &c. Ois. t. 1. f. 2.
10. T. *sparverius* (Linn.) Pl. enl. 444. 465., Wils. American Ornithology, pl. 32. f. 2. pl. 16. f. 1. — Falco gracilis et F. isabellinus *Swains.*; Falco dominicensis *Gmel.*; Type of Pœcilornis *Kaup* (1844).
11. T. *cinnamominus* (Swains.) Two Cent. and a Quarter, p. 281. Vieill. Ois. d'Amér. Sept. t. 12, 13. ?
12. T. *sparveroides* (Vigors), Zool. Journ. iii. 436., Voy. l'Ile de Cuba, Ois. t. 1.
13. T. *vespertinus* (Linn.) Pl. enl. 431., Pall. Zoogr. t. 6., Kittl. Kupf. der Vögel, t. 3. f. 1. — Falco rufipes *Beseke*; Type of Erythropus *Boie* (1828).

IERAX *Vigors.*†

Bill moderate, compressed, and the upper mandible strongly and sharply bidentated. *Wings* shorter than the tail, with the second and third quills the longest, and slightly notched near the tip. *Tarsi* strong, moderate, covered in front with transverse scales. *Toes* lengthened, strong, the lateral ones nearly equal, and all armed with strong compressed claws.

The birds of this subgenus are found only in India and its isles; and their habits and manners are at present unknown.

1. I. *cærulescens* (Linn.) Edwards' Birds, pl. 108. — Falco bengalensis *Briss.*
2. I. *malayensis* Strickl. Ann. Mag. Nat. Hist. 1844. p. 33., Pl. col. 97. — Falco cærulescens *Kittl.* Kupf. Nat. der Vög. t. 3. f. 2. — Falco fringillarius *Drap.* ?
3. I. *erythrogenys* Vigors, Proc. Z. S. 1831. 96.
4. I. *melanoleucus* Blyth, Ann. Mag. Nat. Hist. 1844. p. 35.
5. I. *entolmus* Hodgs. — Falco cærulescens var. *Lath.*
6. I. *sericeus* (Kittl.) Mém. de l'Acad. Impér. St. Petersb. 1835. p. 1., t. 1. Kittl. Kupf. Nat. der Vög. t. 3. f. 3. — Falco Gironnierii *Eydoux & Souley.* Voy. de la Bonite, Ois. t. 1.

* Established by Vieillot (*Ois. d'Amér. Sept.*) in 1807. *Cerchneis* of M. Boie (1826), *Ægypius* of M. Kaup (1829), *Falcula* of Mr. Hodgson (1837), and *Tichornis* of M. Kaup (1844) are coequal with the name employed. It embraces *Pœcilornis* of M. Kaup (1844), and *Erythropus* of M. Brehm (1828); and *Pannychistes* of M. Kaup (1829) is coequal with the latter.

† This was also established by Vigors (*Zool. Journ.* i. p. 528.) in 1824.

HARPAGUS *Vigors.**

Bill short and compressed, but the lateral margins strongly armed with two distinct teeth near the tip ; the nostrils exposed and oval. *Wings* moderate, with the third, fourth, and fifth quills the longest. *Tail* moderate and rounded. *Tarsi* slender, as long as the middle toe, covered with transverse scales in front. *Toes* moderate, with the lateral ones unequal.

The species is peculiar to South America; but the habits and manners of this bird have not been noticed by any naturalist.

H. *bidentatus* (Lath.) Vigors, Pl. col. 38. 228. — Bidens rufiventer et B. albiventer *Spix*, Av. Bras. t. 6.; Falco Diodon *Temm.* Pl. col. 198.; Bidens femoralis et B. cinerascens *Spix*, Av. Bras. t. 7.; Diodon brasiliensis *Less.*

* Established by Vigors (*Zool. Journ.* i. p. 327.) in 1824. *Bidens* of Spix (1824), *Diodon* of M. Lesson (1831), and *Diplodon* of Nitzsch (1840), are coequal with the name used.

November, 1844.

GAMPSONYX
Swainsonii Vig.

The fifth Subfamily,

MILVINÆ, or KITES,

have the Bill short, weak, with the tip hooked and acute, and the lateral margins sinuated; the Nostrils basal and lateral, with the opening mostly in the form of an oblique slit; the Wings long and pointed; the Tarsi hardly longer than the hind toe, and robust; the Toes moderate, broad, and padded beneath.

BAZA *Hodgs.**

Bill moderate, elevated at the base, which is broad, the sides compressed, the culmen much arched, and the lateral margins furnished with two small teeth near the tip; the lower mandible also furnished with small teeth near the tip; the lores clothed with small feathers; the nostrils placed in the cere, in the form of an oblique slit. *Wings* lengthened, nearly reaching to the end of the tail, with the third and fourth quills the longest. *Tail* long and broad. *Tarsi* thick and very short, longer than the middle toe; basal half plumed, and the other part covered with small scales. *Toes* thick, free at their base, the inner longer than the outer; the claws small and acute.

These birds are found in India, its archipelago, and Australia. They are usually seen soaring high in the air, and they are supposed, at least partly, to feed on honey and on the larvæ of insects.

1. B. *lophotes* (Temm.) G. R. Gray, Pl. col. t. 10. — Buteo cristatus *Vieill.*; Lophotes indicus *Less.*; Lepidogenys Lathami *Gray*; Baza syama *Hodgs.*

2. B. *subcristata* (Gould), P. Z. S. 1837. 140., Gould's B. of Austr. pl.

3. B. *Reinwardtii* (Müll.) Verh. over de Nat. Gesch. der Nederl. &c. No. 5. pl. 5.

AVICIDA *Swains.*†

Bill strong, with the upper mandible furnished with two teeth, and the lower mandible emarginated. *Wings* lengthened, with the fourth quill the longest. *Tarsi* not longer than the hind toe, the basal half plumed and robust. *Toes* remarkably broad, the inner toe longer than the outer; the claws strong and curved.

This division is peculiar to Western Africa.

A. *cuculoides* Swains. B. of Western Afr. 1. pl. 1.

* This genus was originally established by M. Lesson under the name of *Lophotes* in 1831, which word having been employed, it becomes necessary to use the one next given, which is that of Mr. Hodgson (1836) as above. Mr. Gray had also proposed *Lepidogenys* in 1839. In 1841 Mr. Hodgson changed his name to *Hyptiopus*.

† Established by Mr. Swainson in 1837, in his *Birds of Western Africa*.

Pernis *Cuv.**

Bill weak, gradually curved from the base to the tip, which is hooked, the lateral margins curved, the sides compressed, the gonys gradually advancing upwards; the nostrils long, narrow, placed obliquely in the cere; the lores thickly clothed with scalelike feathers. *Wings* long, broad, with the third, fourth, and fifth quills the longest. *Tail* long, broad, and somewhat rounded. *Tarsi* short, with the basal half plumed, and the rest covered with reticulated scales. *Toes* slender, with the last joint covered with transverse scales, the inner one the longest; the claws moderate and curved.

These migratory birds inhabit the eastern parts of the Old World. The typical species is occasionally found in England. They prey chiefly on insects, especially on bees, wasps, and their larvæ, and on the smaller species of reptiles and quadrupeds. They are sometimes seen flying with ease and graceful buoyancy near ponds, in search of dragon flies and other aquatic insects. They build in the lofty trees, making their nest of twigs lined with wool, &c.

1. P. *apivorus* (Linn.) Pl. enl. 420. — Falco poliorhynchus *Bechst.*; Accipiter lacertarius *Pall.*; Pernis communis *Cuv.*; Falco dubius *Sparr.*; F. incertus *Lath.* Jard. & Selby's Ill. Orn. n. s. t. 1.
2. P. *cristatus* Cuv. Reg. Anim. p. 232. t. 3. f. 4. — Falco ptilorhynchus *Temm.* Pl. col. 44.; Pernis Elliottii *James.*; P. maculosa *Less.*
3. P. *Jerdoni* Blyth, Journ. A. S. 1842. 464.
4. ? P. *torquatus* Less. Traité d'Ornith. p. 76.
5. ? P. *ruficollis* Less. Traité d'Ornith. p. 77.
6. ? P. *albogularis* Less. Traité d'Ornith. p. 77.

Milvus *Cuv.*†

Bill laterally compressed, the culmen straight at the base and then much curved to the tip, which is acute, the lateral margins somewhat straight; the nostrils oval, and placed rather obliquely in the cere. *Wings* very long, with the third and fourth quills the longest. *Tail* very long, broad, rounded or more or less forked at the end. *Tarsi* very short, partly plumed from the base, and the rest covered with scales. *Toes* rather short, with the outer united at its base to the middle one; the claws long and curved.

The species of this genus are scattered in various parts of the Old World. Their lengthened wings and tail give them great power in directing their course, which consists of large and sweeping circles, performed with ease and gracefulness of flight, and they sometimes soar to a great height in the air. They seize their prey upon the ground; it consists of young hares, rats, lizards, chickens, &c., and, when hard pressed for food, they do not refuse carrion, &c. It is in the fork of a large tree, generally in an extensive wood, that the nest is formed, made of sticks, lined with smooth materials. The female lays two or three eggs.

1. M. *regalis* Briss. Pl. enl. 422. — Falco milvus *Linn.*; F. austriacus *Gmel.*; Milvus ictinus *Sav.*; M. castaneus et M. russicus *Daud.*; Accipiter regalis *Pall.*
2. M. *niger* Briss. Pl. enl. 472. — Falco ater et F. ægyptius *Gmel.*; F. fusco-ater *Mey.*; F. cinereo-ferrugineus *Forst.*; F. migrans *Bodd.*; F. parasiticus *Daud.* Le Vaill. Ois. d'Afr. t. 22.; Accipiter milvus *Pall.*; The Type of Hydroictinia of *Kaup* (1844).
3. M. *cheela* (Lath.) — Milvus govinda *Sykes.*
4. M. *affinis* Gould, Proc. Z. S. 1837. 140., B. of Austr. pl.
5. M. *isurus* Gould, Proc. Z. S. 1837. 140., B. of Austr. pl. — Falco pacificus *Lath.?* Lamb. Icon. ined. t.
6. M. *melanotis* Temm. & Schl., Fauna Japonica, Aves, t. 5.

Nauclerus *Vigors.*‡

Bill short, weak, broader than elevated at the base, the culmen much curved and hooked at the tip, and the sides compressed; the nostrils oblique and suboval. *Wings* very long and pointed, with the

* Cuvier proposed this genus in 1817 (*Règne Animal*, p. 322.).
† It was in 1799 or 1800 that Cuvier established this genus. It embraces *Hydroictinia* of M. Kaup (1844).
‡ It was in 1825 that Vigors established this genus (*Zoological Journal*, ii. p. 386.).

second and third quills the longest. *Tail* very long, and deeply emarginated. *Tarsi* very short, with the basal half plumed, and the rest covered with small scales. *Toes* short, free, and padded beneath, with the lateral toes nearly equal, the inner one the longest, and the hind toe long.

The two species inhabit South America and Africa; the former is sometimes seen also in the United States and in England. Their flight is easy and graceful, when sweeping among the trees in the manner of swallows, in pursuit of insects. In the early part of May, when a species of cicada, or locust, swarms among the trees of America, these birds may be observed frequently snatching them from the trees during their flight. They also feed on reptiles, and are said to carry their prey in their claws, and feed as they fly. The nest is formed outwardly of sticks intermixed with moss, and lined with coarse grass and a few feathers. The eggs are four to six in number.

1. N. *furcatus* (Linn.) Vigors, Catesby's Carol. pl. 4., Wils. Amer. Orn. pl. 51. f. 2. — Elanoides yetapa *Vieill.* ?

2. N. *Riocourii* (Vieill.) Vigors, Gal. des Ois. t. 16., Temm. Pl. col. 85.

Rostrhamus *Less.**

Bill long, very slender, compressed, and much hooked and acute at the tip; the nostrils basal and lateral, with the opening suboval. *Wings* long and pointed, with the third and fourth quills nearly equal and longest. *Tail* moderate and emarginated. *Tarsi* lengthened, half plumed, and the apical half scutellated. *Toes* lengthened, strong, the inner toe the longest, and the hind toe as long as the inner one; the claws very long and acute. The lores naked.

The typical species of this genus is found in the warmer parts of America, especially near the Rio de la Plata. It lives chiefly near stagnant water, preying on toads and frogs, or else is seen perched on the loftiest trees.

R. *hamatus* (Illig.) Pl. col. 91. 231. — Herpetotheres sociabilis *Vieill.* Ency. Méth. 1248.; Falco leucopygius *Spix*, Av. Bras. t. 2.; Rostrhamus niger *Less.* Mag. de Zool. 1834. Ois. t. 20.

Cymindis *Cuv.*†

Bill moderate, elevated, much compressed on the sides, and the culmen gradually sloping to the tip, which is hooked and acute; the nostrils basal, lateral, obliquely transverse, and narrowed *Wings* long, with the third, fourth, and fifth quills nearly equal and the longest. *Tail* long and rounded. *Tarsi* short, strong, with the basal half plumed, and the rest covered with small scales. *Toes* long, very robust, with the inner toe longer than the outer, and the claws long, strong, and curved.

Tropical America is the peculiar country of the species of this genus.

C. *cayanensis* (Gmel.) Cuv. Pl. enl. 473. — Asturina cyanopus *Vieill.* Mag. de Zool. 1835. Ois. t. 22.; Falco palliatus *Temm.* Pl. col. 204.; Cymindis buteonides *Less.*

2. C. *uncinatus* (Temm.) Pl. col. 103, 104, 105. — Falco vitticaudus *Pr. Max.* ?

Elanus *Sav.*‡

Bill short, very broad at the base, and compressed towards the tip, which is hooked and acute; the nostrils large and suboval. *Wings* very long, pointed, and reaching beyond the tail, with the second

* Established by M. Lesson (*Traité d'Ornithologie*, p. 55.).

† This genus was established in 1817 by Cuvier, in his *Règne Animal*, p. 319. It is equal with *Leptodon* (1836) of M. Sundevall, and *Odontriorchis* (1844) of M. Kaup.

‡ It was in the *Histoire de l'Egypte*, p. 98., that Savigny established this division in 1809. It is coequal with *Elanoides* of Vieillot (1825).

quill the longest. *Tail* long, and slightly emarginated. *Tarsi* short, nearly the length of the middle toe, with the basal part plumed, and the other covered with reticulated scales. *Toes* moderate, broad and free at the base, with the outer much shorter than the inner toe; the claws strong and curved.

These birds are found scattered over the warmer parts of the world. They are generally observed perched upon trees or high bushes, or flying above the tops of the lofty trees, seeking for orthopterous insects and small birds, on which they feed. They possess great courage, and will attack crows, kites, &c., and drive them away. The nest is formed between two branches, and is composed of twigs lined with moss and feathers. The female deposits from four to five eggs.

1. E. *melanopterus* (Daud.) Leach, Le Vaill. Ois. d'Afr. t. 36, 37. Hist. d'Egypt. Ois. t. 2. f. 2. — Elanus cæsius *Sav.*; Falco Soninensis *Lath.*; F. vocifer *Lath.*

2. E. *axillaris* (Lath.) G. R. Gray, Lamb. Icon. ined. 1. t. 39. — Elanus melanopterus *Vig. & Horsf.*; Elanus notatus *Gould*, B. of Austr. pl.

3. E. *scriptus* Gould, Proc. Z. S. 1842. 80., B. of Austr. pl.

4. E. *leucurus* (Vieill.) N. Dict. Hist. Nat. xx. 563. — Falco dispar *Temm.* Pl. col. 319., Pr. Bonap. Amer. Orn. pl. 11. f. 1., Azara No. 36.

Gampsonyx *Vigors.**

Bill short, broad at the base, much compressed on the sides towards the tip, which is hooked and acute; the nostrils basal, lateral, and oblique. *Wings* long and pointed, with the second and third quills the longest. *Tail* long, and slightly rounded. *Tarsi* long, robust, and covered with small reticulated scales. *Toes* long and strong, with the outer toe shorter than the inner, the hind toe long and strong; the claws long and acute.

The habits of this bird are not known at present. It is, however, peculiar to the tropical parts of South America.

G. *Swainsoni* Vigors, Zool. Journ. ii. p. 69. — Elanus torquatus *Cuv.*

Ictinia *Vieill.*†

Bill short, elevated, and broad at the base, the culmen much arched to the tip, which is strongly emarginated, the lateral margins nearly straight; the nostrils basal, lateral, and rather rounded. *Wings* very long and pointed, with the third and fourth quills the longest. *Tail* short, and slightly emarginated. *Tarsi* longer than the middle toe, covered with transverse scales in front, and with small scales posteriorly. *Toes* short and strong, with the lateral ones unequal, the inner the longest; the claws short, compressed, and sharp.

It is peculiar to America, and is generally seen sailing about in easy circles at a great elevation, probably tracing the tainted atmosphere for carrion, on which it feeds, or searching for insects that wing the higher region of the air. At some seasons it is observed sweeping about among the trees like swallows, evidently in pursuit of the cicadæ, or locusts, which are found on them in great quantity. Reptiles and small birds also form a portion of their subsistence.

1. I. *plumbea* (Lath.) Temm. Pl. col. 180. — Milvus cenchris *Vieill.* Ois. d'Amér. Sept. t. 10. bis, Spix, Av. Bras. t. 8.

2. I. *mississippensis* (Wils.) Amer. Orn. iii. 30. pl. 25. f. 1. — Ictinia ophiophagus *Vieill.* Gal. des Ois. t. 17., Griff. An. Kingd. pl. 1. p.

* Established in 1825, by the late Mr. Vigors (*Zoological Journal*, ii. p. 69.).

† Established by Vieillot in 1816 (*Analyse*, p. 24.). It is coequal with *Nertus* of M. Boie (1828).

Hullmandel's Patent Lithotint.

ACCIPITER
tinus (Lath.)

C. Hullmandel's Patent Lithotint

1. MICRASTUR brachypterus. 2. POLIORNIS teesa. 3. ASTUR palumbarius.
4. ACCIPITER Nisus. 5. MELIERAX musicus. 6. ISCHNOSCELES hemidactylus.

The sixth Subfamily,

ACCIPITRINÆ, or SPARROWHAWKS,

have the Bill short, much arched from the base to the tip, which is acute; the sides compressed; and the lateral margins greatly festooned: the Wings generally long: the Tail ample: the Tarsi lengthened, and shielded in front: the Toes of various lengths, and generally slender; and the Claws long and very acute.

ASTUR *Lacep.**

Bill short, broad at the base, and with the sides gradually compressed to the tip; the culmen elevated, and much arched to the tip, which is acute, and the lateral margins festooned in the middle; the nostrils large, suboval, and placed in the basal cere. *Wings* long, reaching to the middle of the tail; with the third, fourth, and fifth quills nearly equal and longest. *Tail* long and broad. *Tarsi* rather longer than the middle toe; the anterior and posterior sides covered with broad transverse scales. *Toes* more or less lengthened, strong, and padded beneath each joint; the lateral toes unequal; the inner and hind ones equally long and strong, and armed with long, strong, curved claws.

They are found scattered throughout the world, and are generally observed in wooded districts, but are sometimes seen in mountainous countries. Their flight is very rapid; and they always strike their prey while on the wing. They often lurk about poultry-yards, destroying the stock contained in them. Wild ducks and others of the feathered tribe, as well as hares and rabbits, form their principal food. The nests of these birds are generally placed on lofty trees, and the female lays from two to four eggs.

1. A. *palumbarius* (Linn.) Bechst. Pl. enl. 418.—Falco gallinarius *Gmel.* Pl. enl. 461. 423.; F. gentilis *Linn.*; F. albescens *Bodd.*; Accipiter astur *Pall.* Zoogr. t. 11., Gould, B. of Eur. i. pl. 17.; Astur gallinarum *Brehm.*

2. A. *atricapillus* (Wils.) Amer. Orn. pl. 52. f. 3.—Falco regalis *Temm.* Pl. col. 495.; Dædalion pictum *Less.* Fauna Bor. Amer. Birds, pl. 26., Jard. and Selby, Ill. Orn. pl. 121.

3. A. *melanoleucus* A. Smith, Ill. S. Afr. Zool. pl. 18.—Astur Smithii *Kaup*, Isis, 1847. p. 196.

4. A. *radiatus* (Lath.) G. R. Gray, Lath. Gen. Syn. Suppl. pl. 121., Lamb, Icon. ined. i. 38., Gould, B. of Austr. pl. .—Haliætus Cale? *Vig. & Horsf.*

5. A. *unicinctus* (Temm.) Pl. col. 313.—Falco anthracinus *Licht.*; F. Harrissii *Audub.* B. of Amer. pl. 392.; Polyborus tæniurus *Tschudi*; Type of Spizageranus *Kaup* (1845).

6. A. *novæ hollandiæ* (Gmel.) Cuv. Jard. and Selby, Ill. Orn. pl. 1.—Falco albus *Shaw*; Sparvius niveus *Vieill.*; Dædalion candidum *Less.*; F. leucaetos *Forst.*; Astur Rayii *Vig. & Horsf.*; F. clarus *Lath.* Lamb, Icon. ined. fl. 5.; Type of Leucospiza *Kaup* (1844).

7. A. *trivirgatus* (Temm.) Cuv. Pl. col. 303.—Astur cristatus *G. R. Gray*; A. palumbarius *Jerd.*; A. indicus *Hodgs.*; Spizaetus rufistinctus *M'Clell.*; Type of Lophospiza *Kaup* (1844).

8. A. *nitidus* (Lath.) D'Orb. & Lafr.—Asturina cinerea *Vieill.* Gal. des Ois. t. 20.; Falco striolatz *Temm.* Pl. col. 87. 294.; Type of Asturina *Vieill.* (1816).

9. A. *poliogaster* (Temm.) Cuv. Pl. col. 264. 295.—Nisus pileatus *Tschudi.*

10. A. *leucorrhous* (Quoy & Gaim.) G. R. Gray, Voy. de l'Uranie, t. 13.

11. A. *magnirostris* (Gmel.) G. R. Gray.—Falco insectivorus *Spix*, Av. Bras. t. 8 a., Pl. col. 86., Pl. enl. 464.; Type of Rupornis *Kaup* (1844).

12. A. *longicaudus* (Garn.) Voy. de la Coqu. t. 10.

13. A. *albifrons* Kaup, Isis, 1847. p. 200. t. . f.

* Established by Lacépède (*Mém. de l'Inst.*) in 1800 or 1801. In 1809 Savigny proposed *Dædalion*; in 1816 Vieillot used *Sparvius*; while in 1844 Dr. Kaup has formed two divisions, viz. *Leucospiza* et *Lophospiza*, which I consider to be coequal with the one employed. It also embraces *Asturina* of Vieillot (1816), *Rupornis* (1844) and *Spizageranus* (1845) of Dr. Kaup.

Geranospiza *Kaup.**

Bill moderate, gradually arched to the tip, which is much hooked and acute; the sides compressed, and the lateral margins festooned; the nostrils placed anteriorly in the cere, and suboval. *Wings* lengthened; with the fourth and fifth quills the longest. *Tail* lengthened and rounded. *Tarsi* lengthened, nearly twice the length of the middle toe, very slender, and covered in front with broad nearly obsolete scales. *Toes* very short and thick; with the outer toe very small and slender; the claws moderate and curved.

These species inhabit South America, where they frequent the inundated ground on the sides of the great rivers. They are observed generally in pairs, perched on the palms or other large trees, waiting for their prey, which is supposed to consist of aquatic reptiles and fish. Their flight is low, easy, and rather rapid, though they fly but a short distance at a time.

1. G. *gracilis* (Temm.) Kaup, Pl. col. 91.— Falco hemidactylus *Temm.* Pl. col. 3.; F. Wiedii brasiliensis *Griff.* An. Kingd. i. pl. p. 238.?; Sparvius cærulescens *Vieill.* Azara, No. 22.

2. G. *niger* (Dubus), Bull. Acad. Roy. Belgium, and Rev. Zool. 1848. p. 241.

Micrastur.†

Bill short, elevated at the base, much arched to the tip, which is acute; the base covered with a hairy cere, and the lores and round the eyes naked. *Wings* short and rounded; with the fourth, fifth, and sixth quills the longest. *Tail* long and much rounded. *Tarsi* lengthened, slender, and covered with large reticulated scales. *Toes* long and slender; the lateral ones unequal, and the hind toe shorter than the inner; the claws long, curved, and acute.

The birds which compose this division are peculiar to South America. They prefer the neighbourhood of forests near the banks of large rivers, where they are seen perched on the lower branches of trees, waiting the approach of their prey, which consists of small birds and mammalia. They are active birds, flying with rapidity, though invariably close to the ground.

1. M. *brachypterus* (Temm.) G. R. Gray, Pl. col. 141. 116.— Sparvius semitorquatus *Vieill.*; Falco leucomelas *Ill.*; Sparvius ruficollis et Sp. melanoleucus *Vieill.* Azara, No. 28, 29.

2. M. *xanthothorax* (Temm.) Pl. col. 92.— Falco leucauchen *Temm.* Pl. col. 306.

3. M. *concentricus* (Ill.) Less. Tr. d'Orn p. 60.— Sparvius gilvicollis *Vieill.*

4. M. *guerilla* Cassin, Proc. Acad. Philad. 1848. p. 87.

Accipiter *Briss.*‡

Bill very short, with the culmen much arched to the tip, which is acute; the sides much compressed, and the lateral margins festooned; the nostrils placed anteriorly in the cere, large, and suboval, partly

* Originally established by Mr. Strickland under the name of *Ichnoscelis* in 1844, which word having been previously used, it was changed by Dr. Kaup to the above name in 1847.

† The above name was given (1841) by me in the place of *Brachypterus* of M. Lesson, which he proposed in 1837, and which he had previously employed in the form of *Brachypteryx*; while in 1844 M. Cabanis changed it to *Climacocercus*. *Carnifer* of M. Lesson (1842) is coequal with his first name.

‡ Established by Brisson (*Ornithologie*) in 1760. Between 1799 and 1800 Cuvier proposed *Nisus*; in 1816 Dr. Leach used *Ierax*, and Dr. Kaup *Hieraspiza* (1844) and *Urospiza* (1845), which are coequal. To this division belong *Micronisus* of me (1840), with which *Nisastur* of Mr. Blyth (1844), *Tachyspiza* (1844) and *Scelospiza* (1847) of Dr. Kaup, are synonymous.

concealed by the projecting hairs of the lores. *Wings* moderate; with the fourth and fifth quills nearly equal and longest. *Tail* long, ample, and nearly square at its end. *Tarsi* longer than the middle toe, covered in front with nearly obsolete scales. *Toes* more or less lengthened, and padded beneath the joints; the lateral ones unequal; and the inner and hind toes equal in length, and both with a strong curved claw.

These birds are found in various parts of the world, generally in the valleys and wooded districts. They are very courageous. Their flight is low, sweeping over the ground with great rapidity; and they pounce upon their prey with great exactness while on the wing. Their food consists almost exclusively of birds, such as partridges and pigeons, and sometimes of small lizards, &c. The nest is built upon low trees, or in a bush, and is composed of slender sticks; but the females sometimes occupy the deserted nests of other birds. They deposit from four to six eggs.

1. A. *nisus* (Linn.) Pall. Zoogr. t. 12., Pl. enl. 467. 412.—Accipiter fringillarius *Ray*; Nisus communis *Cuv.*; Falco lacteus *Gmel.*; Ac. nisosimilis *Tick.*; Ac. subtypicus *Hodgs.* Gould, B. of Eur. pl. 18.

2. A. *tachiro* (Daud.) Levaill. Ois. d'Afr. t. 24.—Falco polyzonus *Temm.* Less. Tr. d'Orn. p. 58.; F. unduliventris *Rüpp.* Faun. Abyss. t. 18. f. 1., Pl. col. 377. 420.

3. A. *rufiventris* A. Smith, Ill. Zool. S. Afr. Birds, pl. 93.—Falco exilis *Temm.* Pl. col. 496.; F. perspicillatus *Rüpp.* Faun. Abyss. t. 18. f. 2.

4. A. *fuscus* (Gmel.) Mill. Ill. pl. 18.—Accipiter striatus *Vieill.* Ois. de l'Amér. Sept. t. 14.; Nisus Malfini *Less.*; Falco pennsylvanicus *Wils.* Amer. Orn. pl. 46. f. 1.; F. velox *Wils.* Amer. Orn. pl. 45. f. 1.; Sparvius lineatus, S. striatus, et S. ardosaceus *Vieill.*; F. dubius et F. obscurus *Gmel.*?; Accipiter mexicanus *Swains.*; Ac. fringilloïdes *Vigors*? Pl. col. 67.

5. A. *pileatus* (Pr. Max.) Pl. col. 205. Azara, No. 26.

6. ? A. *Cooperi* (Pr. Bonap.) Amer. Orn. pl. 10. f. 1.—Falco Stanleyi *Audub.* B. of Amer. pl. 56.; F. Beskii *Licht.*; Nisus variatus *Cuv.* Less. Tr. d'Orn. p. 61., Azara, Voy. iii. t. 24., Azara, No. 24.; Sparvius guttatus et S. major *Vieill.*

7. A. *madagascariensis* Verr. S. Afr. Journ. (1833.) p. 80.

8. A. *tinus* (Lath.)—Falco superciliosus *Linn.*?; Sparvius minutus et S. subniger *Vieill.*; Type of Hieraspiza *Kaup* (1847).

9. A. *minullus* (Daud.) Levaill. Ois. d'Afr. t. 34.

10. A. *virgatus* (Temm.) Pl. col. 109.—Accipiter besra *Jerd.* Ill. Ind. Orn. pl. 4.; Falco minutus *Linn.*?; F. Brissonianus *Shaw*?; Nisus minutus *Less.*; Ac. affinis *Hodgs.*; Ac. nisoïdes *Bl.*?; N. hyogaster *Müll. & Schl.*; N. gularis *Temm. & Schl.* Faun. Japon. t. 2.; F. Delafonii *H. Smith*, Griff. An. Kingd. i. pl. p. 239.

11. A. *cirrocephalus* (Vieill.) N. Diet. d'Hist. Nat. x. p. 328.—Accipiter torquatus *Vig. & Horsf.*; Sparvius tricolor *Vieill.*; Nisus australis *Less.*; Falco melanops *Lath.*? Gould, B. of Austr. pl. 19., Pl. col. 43. 93.; Type of Urospiza *Kaup* (1847).

12. A. *cruentus* (Gould), Proc. Z. S. 1842. p. 113., B. of Austr. i. pl. 18.

13 A. *approximans* (Vig. & Horsf.) Linn. Trans. xv. p. 181.—Astur radiatus et A. fasciatus *Vig. & Horsf.* Gould, B. of Austr. i. pl. 17., Pl. col. 123.

14. A. *badius* (Gmel.) Brown, Ill. pl. 3.—Falco Brownii *Shaw*; F. Dussumieri *Temm.* Pl. col. 308. 336.; Accipiter dukhunensis *Sykes*; Ac. fringillarius *Jerd.*; A. scutarius *Hodgs.*; Nisus manillensis *Meyen*, Nova Acta, 1834, Suppl. t. ix., Jerd. Ill. Ind. Ornith. pl. 4.

15. A. *sphenurus* (Rüpp.) Fauna Abyss. p. 42., Syst. Uebers. von Nord-Ost Afr. t. 2.—Accipiter brachydactylus *Swains.*; Ac. polyzonoïdes *A. Smith*, Ill. S. Afr. Zool. Birds, pl. 11.; Astur Rüppellii *Kaup*.

16. A. *gabar* (Daud.) Levaill. Ois. d'Afr. t. 33.—Accipiter erythrorhynchus *Swains.*; Falco Banksii *Temm.*; Sparvius niger et Sp. leucorrhous *Vieill.* Pl. col. 122. 140., Gal. des Ois. t. 22., Gould, Syn. B. of Austr. iii. pl. f. 1.; Type of Micronisus *G. R. Gray* (1840).

17. A. *monogrammicus* (Temm.) Pl. col. 314., Swains. B. of W. Afr. pl. 4.

18. A. *soloensis* (Horsf.) Linn. Trans. xiii. p. 137.—Falco cuculoïdes *Temm.* Pl. col. 110. 129.; Type of Tachyspiza *Kaup* (1844).

19. A. *Francesii* A. Smith, Isis, 1847. p. 173.—Type of Scelospiza *Kaup* (1847).

20. ? A. *carbonarius* Licht. Berl. Verz. 1842. p. 11.

Poliornis *Kaup.**

Bill moderate, broad at the base, and compressed towards the tip, which is acute and much hooked; the lateral margins festooned; the base covered for less than half the length of the bill with a cere; the nostrils large and suboval. *Wings* lengthened, with the third and fourth quills the longest. *Tail* long,

* Established by Dr. Kaup (*Class. der Säug. und Vog.* p. 122.) in 1844. In the same year, Mr. Hodgson, in his *List of Nepal Birds*, published this division under the name of *Butastur*.

ample, and rounded at its end. *Tarsi* twice the length of the middle toe, without the claw; and covered with reticulated scales, those in front the largest. *Toes* very short; the lateral ones unequal, and the hind toe and inner equal, and covered with transverse scales above.

The species are peculiar to India and its isles. Mr. Jerdon informs us that the typical species of this division frequents topes, as well as the open country, where it may be seen seated on the low trees and shrubs, an ant-hill, or the banks of rivers, whence it pounces on mice, lizards, small snakes, various large insects, and their larvæ. The flight of the Teesa is tolerably rapid, and performed by repeated strokes of the wings, exactly like that of the kestrels, for which, at a distance, he has occasionally mistaken it. Its flight, too, in general, is low. He has seen it several times take a much more extended flight than usual over a rumna, flying at a low elevation, and now and then rising slowly a few feet; and has also observed it apparently capture a locust, or some other insect on the wing.

1. P. *Teesa* (Gray), Kaup, Ill. Ind. Zool. ii. pl. 30.—Astur Hyder *Sykes*.
2. P. *liventer* (Temm.) Kaup, Pl. col. 438.—Buteo pallidus *Less*.
3. P. *poliogenys* (Temm.) Kaup, Pl. col. 325.—Falco indicus *Gmel.*?
4. P. *pyrrhogenys* (Temm. & Schl.) Fauna Japonica, p. 21.—Astur barbatus *Eyton*.

Melierax.*

Bill moderate, gradually arched to the tip, broad at the base, and with the sides compressed towards the tip; the cere covering half of the bill, and the sides of the gape naked; the nostrils placed in the cere, large, and rather oval. *Wings* long; with the third, fourth, and fifth quills nearly equal and longest. *Tail* long and ample. *Tarsi* nearly twice the length of the middle toe, and covered in front with transverse scales. *Toes* rather short, with the lateral toes unequal; the outer toe the shorter and weaker; the hind toe as long as the inner, and equally strong.

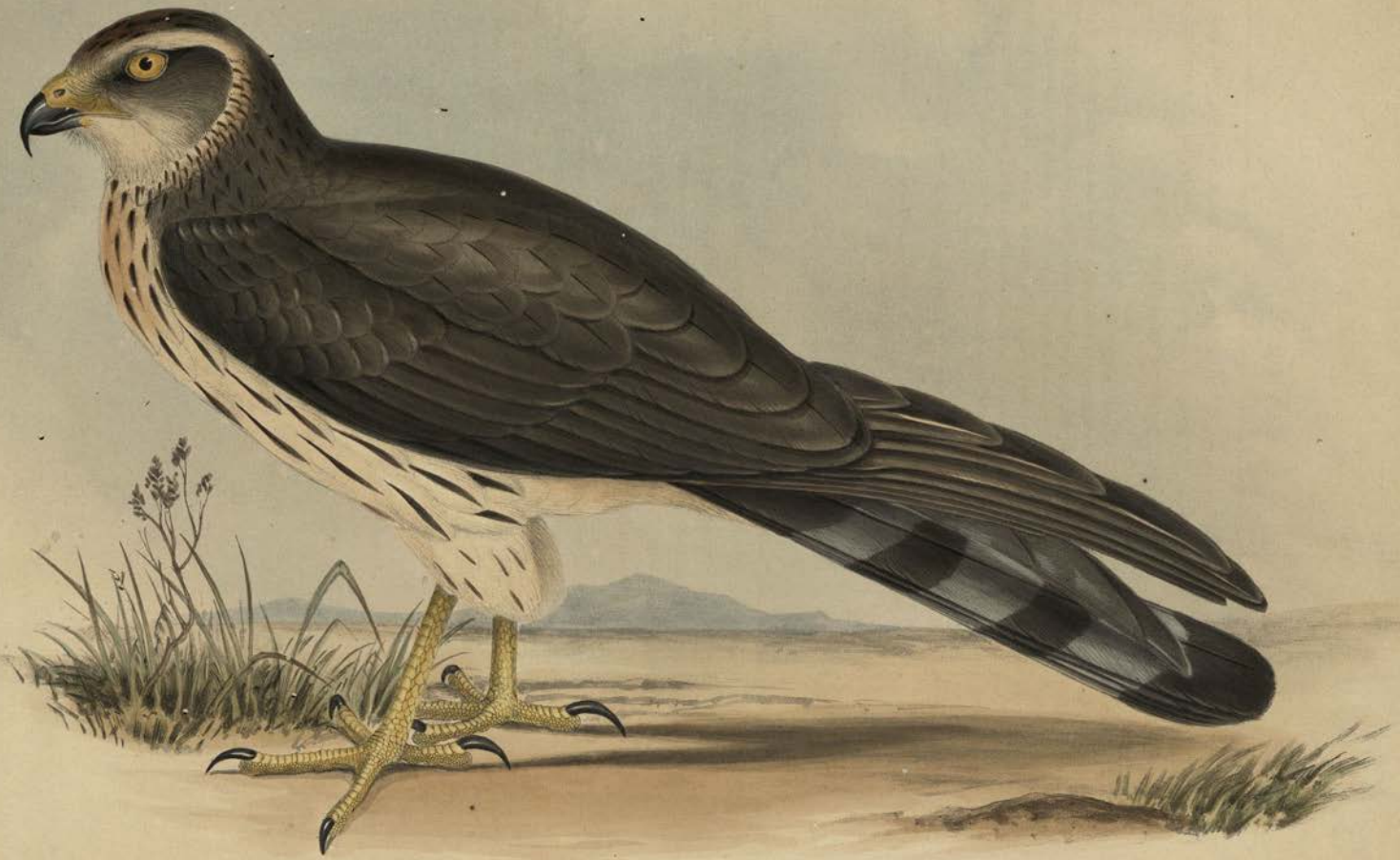
This bird is only found on the continent of Africa, and it is principally on woody banks of rivers that it is observed. It possesses great courage and a rapid flight, which enables it to attack birds much larger than itself. It pounces upon various birds and small mammalia, on which it feeds. The male, when perched on the summit of the trees in company with its female, or near the nest when she is sitting, sings for hours together; and is invariably heard in the morning and on the decline of day, and sometimes also during the night. It places its nest on the trees, composed of a few twigs, and the female deposits from four to six eggs.

M. *canorus* (Thunb.) Levaill. Ois. d'Afr. t. 27.—Falco musicus *Daud.*; F. polyzonus *Rüpp.* Fauna Abyss. t. 15. f. 1.

* This division was formed by me in 1840 (*List of Gen. of Birds*, p. 5.).

June, 1849.

CIRCINÆ.



C.Hullmandel's Patent Lithotint.

CIRCUS
megaspilus Gould.

CIRCINÆ.

1. CIRCUS cyaneus. 2. POLYBOROIDES radiatus. 3. SERPENTARIUS reptilivorus.

The seventh Subfamily,

CIRCINÆ, or HARRIERS,

have the Bill moderate, short, with the culmen much curved to the tip, which is hooked; the sides compressed, and the lateral margins festooned; the Wings lengthened and pointed; the Tail long, broad, and even or rounded at the end; the Tarsi usually lengthened and slender; and the Toes rather short.

POLYBOROÏDES *A. Smith.**

Bill broad and elevated at its base, the sides much compressed, and the culmen much curved to the tip, which is hooked; the nostrils placed in front of the cere, with the opening forming a longitudinal slit. *Wings* very long, with the third, fourth, and fifth quills the longest. *Tail* very long, and rounded at the end. *Tarsi* the length of the middle toe, and entirely reticulated. *Toes* long and slender, with the outer toe the length of the hind one. The cheeks round the eyes and cere entirely denuded of plumes or hairs.

The type of this division is found in Madagascar, and in various parts of the continent of Africa. Its habits and manners have not yet been noticed by naturalists.

P. *radiatus* (Scop.) Sonn. Voy. Ind. t. 103. — Falco madagascariensis *Daud.*; F. gymnogenys *Temm.* Pl. col. 307.; Polyboroides typus *A. Smith.* Ill. S. Afr. Zool. Birds, pl. 81, 82.

SERPENTARIUS *Cuv.*†

Bill moderate, broad, and elevated at its base, the culmen much arched to the tip, which is hooked, and the sides much compressed; the nostrils lateral, with the opening large and oblique. *Wings* long, with the third, fourth, and fifth quills nearly equal and longest; armed on the shoulder with an obtuse spur. *Tail* very long, wedge-shaped, with the two middle feathers prolonged. *Tarsi* much lengthened, slender, covered in front with transverse scales. *Toes* very short, with the anterior ones united at their base by a membrane; the hind toe remarkably short and rather elevated; and all covered above with transverse scales. The lores and space round the eyes naked.

The type of this genus inhabits the arid plains of Africa, and is said to have been found in the Philippine Islands. They are usually seen in pairs, and are extremely useful for the purpose of destroying serpents, which form their principal food. The bird attacks these reptiles by striking them first with one of its wings and then with the other, frequently tossing them with its pinion into the air, by which means it avoids the bite of the snake, and at the

* Established by Dr. A. Smith in 1830 (*South-African Journal*). Seven months afterwards, M. Lesson proposed a division under the name of *Gymnogenys* for the same type.

† Cuvier established this genus between 1797 and 1798. It was, however, in 1767, proposed under the name of *Sagittarius* by Vosmaer. It is coequal with *Secretarius* (1806) of Dumeril; *Gypogeranus* (1811) of Illiger, and *Ophiotheres* (1816) of Vieillot.

same time occasions it some injury. After a series of such attacks, the snake becomes wearied out, and the bird is enabled to kill and eat it without danger. It feeds also on rats and lizards. When disturbed, it first endeavours to escape by hopping and running, which it does very swiftly, taking wing only when it is not otherwise able to get away. The nest is formed on trees; it is of large size, composed of sticks, and lined with wool and feathers. The female deposits from two to three eggs.

S. *reptilivorus* Daud. Le Vaill. Ois. d'Afr. t. 25. — Falco serpentarius *Gmel.*; Serpentarius africanus *Shaw*; Ophiotheres cristatus *Vieill.*; Gypogeranus capensis, G. gambensis, et G. philippensis *Ogilby*, Sonn. Voy. à la Nouv. Guin. t. 50.

Circus *Lacép.**

Bill moderate, elevated at the base of the culmen and arched to the tip, which is hooked; the sides compressed, and the lateral margins festooned; the nostrils large, oval, and partly concealed by the curved hairs of the lores. *Wings* long, with the third and fourth quills nearly equal and longest. *Tail* long, and rounded on the sides. *Tarsi* long, slender, and compressed, the outer side covered with transverse scales, and the inner with small scales. *Toes* moderate, with the outer one longer than the inner; the claws long, slender, and acute.

Most parts of the world are inhabited by one or more of the species that compose this genus; they are in general found in the uncultivated open country, on marshy land or along the barren sea coast. Their flight is not remarkable for swiftness, but is commonly performed at stated intervals, with ease and buoyancy, within a few feet of the surface of the ground, searching it for their prey.

1. C. *cyaneus* (Linn.) — Accipiter variabilis *Pall.*; Falco bohemicus, F. albicans, F. griseus, et F. montanus *Gmel.*; F. cinereus et F. rubiginosus *Il. Poseg.*; Circus variegatus et C. grallinarius *Vieill.*; F. uliginosus *Gmel.* Wils. Amer. Orn. pl. 51. f. 2.; F. hudsonicus *Linn.* Vieill. Ois. d'Amér. Sept. t. 9., Bonap. Amer. Orn. pl. 12.; F. Buffoni *Gmel.*; F. europogistus *Daud.* Vieill. Ois. d'Amér. Sept. t. 8.; Buteo (Circus) cyaneus? var. ? americanus *Swains. & Rich.* Faun. Bor. Am. pl. 29.; F. strigiceps *Wils.*; Accipiter macrourus *Gmel.*; Type of Strigiceps *Pr. Bonap.* (1831).

2. C. *ranivorus* (Daud.) Vieill. Le Vaill. Ois. d'Afr. t. 23.

3. C. *Swainsoni* A. Smith, Ill. of S. Afr. Zool. pl. 43. 44., Pl. enl. 459. — Circus pallidus *Sykes*, Gould's B. of Eur. pl. 34.; C. dalmaticus *Rüpp.* Mus. Senk. 1834. t. 11.; C. albescens *Less.*

4. C. *cinerascens* (Mont.) Werner's Atlas, t., Gould's B. of Eur. pl. 35. — Circus Montagui *Vieill.*; the Type of Glaucopteryx *Kaup* (1844).

5. C. *cinereus* Vieill. — Falco histrionicus *Quoy et Gaim.* Voy. de l'Uranie, Ois. t. 15. 16.; Circus campestris Vieill. ?

6. C. *melanoleucus* (Gmel.) Vieill. Le Vaill. Ois. d'Afr. t. 32.

7. C. *Acoli* (Daud.) Vieill. Le Vaill. Ois. d'Afr. t. 31.

8. C. *maurus* (Temm.) Pl. col. 461.—Circus Lalandii *A. Smith*, Ill. S. Afr. Zool. pl. 58.

9. C. *macropterus* Vieill. Temm. Pl. col. 22. — Falco palustris *Pr. Max.* — Circus superciliosus *Less.*

10. C. *megaspilus* Gould, Proc. Z. S. 1837. 10., Voy. Beagle, Birds, p. 29.

11. C. *Jardinii* Gould, Proc. Z. S. 1837. pp. 99. 141., Gould's B. of Austr. pl.

12. C. *assimilis* Jard. & Selby, Ill. Orn. pl. 51., Gould's B. of Austr. pl., Zool. Ereb. and Terr. p. 2.

13. C. *æruginosus* (Linn.) Pl. 460. 424., Gould's B. of Eur. pl. 32. — Falco rufus *Gmel.*; Accipiter circus *Pall.*; Circus palustris *Briss.*; F. arundinaceus *Bechst.*; C. rufus var. indicus *Less.*; C. variegatus *Sykes*; C. Sykesi *Less.*; Type of Pygargus *Kaup* (1816).

* Lacépède established this division between 1800 and 1801. M. Kaup used in its place *Pygargus* in 1816. It embraces *Glaucopteryx* 1844) of M. Kaup, and *Strigiceps* (1831) of the Prince of Canino.

C. Hullmandel's Patent Lithotint

ATHENE
nana. (King)

C.H.Rimandel's Patent Lithotint

1. SURNIA ulula. 2. NYCTEA nivea. 3. ATHENE brama.

The third Family,

STRIGIDÆ, or Owls,

have the Bill short, the sides compressed, the base concealed by the projecting bristles, and the culmen much arched to the tip, which is hooked; the Wings usually moderate and rounded; the Tail broad and of various length; the Tarsi generally short, and feathered to the toes; Toes usually short, and either clothed with plumes or slightly covered with hairs; the claws long and very acute. The eyes large, and encompassed with a radiated circle of slender hairy feathers, forming a facial disk.

The first Subfamily,

SURNINÆ, or Hawk-Owls,

have the head small, without tufts, and the facial disk imperfect above the eyes.

Surnia *Dum.**

Bill short, mostly hidden by the projecting plumes, compressed on the sides, the culmen much arched to the tip, which is hooked and acute; the nostrils entirely concealed by the plumes. *Wings* long and pointed, with the third quill the longest. *Tail* lengthened, broad, and wedge-shaped. *Tarsi* short, and closely plumed. *Toes* short, the lateral ones unequal, and all densely clothed with plumes; the claws long, curved, and acute.

It is in the northern parts of Europe and America, and the southern parts of Africa, that these birds are found. They seek their food, which chiefly consists of mice, birds, and insects, mostly in the day time; but, during the winter, those of the northern latitudes feed principally on ptarmigans, and are said to follow the hunter for the purpose of seizing the birds that have been shot by him. They build their nest on trees, and it is composed of sticks, grass, and feathers. The female lays generally two eggs.

1. S. *ulula* (Linn.) Pr. Bonap. Pl. enl. 463., Gould, B. of Eur. pl. 45. — Strix funerea *Gmel.*; S. doliata *Pall.*; S. canadensis et S. Freti Hudsonis *Briss.*; S. hudsonia *Gmel.* Wils. Amer. Orn. pl. 50. *f.* 6.; S. nisoria *Meyer*; S. arctica *Spar.*; Surnia borealis *Less.* Audub. B. of Amer. pl. 378.

2. S. *choucou* (Lath.) Less. Le Vaill. Ois. d'Afr. t. 38. — Strix africana *Shaw.*

3. S. *nisuella* (Lath.) Less. Le Vaill. Ois. d'Afr. t. 39.

* Established by Dumeril in 1806.

Nyctea *Steph.**

Bill short, mostly concealed by the frontal plumes, the culmen arched to the tip, which is hooked and acute, the sides compressed; the nostrils entirely hidden by plumes. *Wings* rather long, with the third quill the longest. *Tail* short, broad, and rounded at the end. *Tarsi* short, thick, and densely plumed. *Toes* short, stout, and thickly clothed with downy feathers; the claws very long, curved, and acute.

The type of this genus is an inhabitant of the arctic circle, migrating to the North of Europe and America. It is usually observed in the open barren places, where it sits on the ground, and, if disturbed, only takes a short flight and again alights, but it sometimes seeks the high trees, especially when watching the hunter, that it may take the opportunity of seizing a portion of his spoil. It hunts principally during the day time, and strikes its prey with its foot while on the wing. Its food consists of hares, rabbits, mice, ducks, and grouse, and even carrion. It has been observed to frequent the shores and banks of shallow rivers, over the surface of which it slowly sails, or sits on a stone slightly raised above the water watching the approach of a fish, which it seizes with a sudden and instantaneous stroke of the foot, seldom missing its aim. It builds upon high rocks or on the ground. The female deposits from two to four eggs, of which two only are usually hatched.

N. *nivea* (Thunb.) Pl. enl. 458., Gould, B. of Eur. pl. 43., Wils. Amer. Orn. pl. 23. f. 1. — Strix nyctea *Linn.*; S. candida *Lath.*; Nyctea erminea *Steph.* Le Vaill. Ois. d'Afr. t. 45., Vieill. Ois. d'Amér. Sept. t. 18., Audub. B. of Amer. pl. 121.

Athene *Boie.*†

Bill short, partly concealed by the projecting plumes, the sides compressed, the culmen much arched to the tip, which is hooked and acute; the nostrils basal, lateral, and hidden by the frontal plumes. *Wings* rather long and rounded, with the third and fourth quills the longest. *Tail* moderate and nearly even. *Tarsi* longer than the middle toe, and covered with plumes. *Toes* short, and covered with scattered hairs; the claws long, arched, and acute.

The birds that compose this genus are most generally found in the more genial parts of both hemispheres. They usually remain quiet during the day, but become active as soon as the sun has passed the horizon. It is in ruins, church towers, or caves, or under roofs of houses, and in the thick forests, even to the great height of 17,000 feet above the sea, that they reside. Some species are observed on lofty trees, and fly about actively in the day time; others prefer the twilight and even the night time to seek their food, which consists of insects, small mammalia, and birds. The insects are, says Mr. Jerdon, sometimes taken on the wing, or snapped off the ground or the trunk of a tree, during their low short undulating flight. They emit cries during the night, and even in the day, from their hiding-places. The nests are concealed in ruins or in the forests. The eggs are usually from two to four in number.

1. A. *noctua* (Retz.) Pl. enl. 439., Gould, B. of Eur. pl. 48. — Strix passerina *Lath.*; Noctua glaux *Sav.*; S. nudipes *Nils.* Edw. Birds, pl. 228.; Noctua veterum *Licht.*

2. A. *brama* (Temm.) Pl. col. 68. — Strix indica *Frankl.*; Noctua tarayensis *Hodgs.*

3. A. *cuculoides* (Vigors), Proc. Z. S. 1830. 8., Gould, Cent. of Birds, pl. 4.

4. A. *erythroptera* Gould, Proc. Z. S. 1837. 136. — Strix perlineata *Hodgs.*; S. radiata *Tick.*; S. cuculoides *Jerd.*

5. A. *auribarbis* (Hodgs.) Journ. As. Soc. Beng. 1837. 369.

* Established by Mr. Stephens in 1825 (*Gen. Zool.* xiii. 62.).

† M. Boie established this genus (*Isis*) in 1822. *Carine* of M. Kaup (1829), *Nyctipetes* of Mr. Swainson (1837), and *Ninox* of Mr. Hodgson (1837) are synonymous with the name employed. It embraces *Glaucidium* of M. Boie (1826).

6. A. *castaneoptera* (Horsf.) Linn. Trans. xiii. 149. — Strix spadicea *Reinw.* Pl. col. 98.

7. A. *Sonneratii* (Temm.) Pl. col. 21.

8. A. *scutellata* (Raffl.) Linn. Trans. xiii. — Strix hirsuta *Temm.* Pl. col. 289.; S. lugubris *Tick.*; Ninox nipalensis *Hodgs.*

9. A. *Brodiei* (Burt.) Proc. Z. S. 1835. 152. — Noctua tubiger *Hodgs.*

10. A. *passerina* (Linn.) Gould, B. of Eur. pl. 50. — Strix pygmæa *Bechst.*; S. acadica *Temm.*; Type of Glaucidium *Boie* (1826).

11. A. *capensis* A. Smith, Ill. S. Afr. Zool. pl. 53., S. Afr. Quart. Journ. 1834.

12. A. *perlata* (Vieill.) N. Dict. Hist. Nat. vii. 26., Le Vaill. Ois. d'Afr. t. 284. — Strix occipitalis *Temm.* Pl. col. 34.

13. A. *Woodfordii* A. Smith, S. Afr. Quart. Journ. 1834., Ill. S. Afr. Zool. pl. 71.

14. A. *pumila* (Ill.) Temm. Pl. col. 39. — Strix minutissima *Pr. Max.*; S. ferox *Vieill.* Azara No. 49.

15. A. *nana* (King), Zool. Journ. iii. p. 426.

16. A. *rufipes* (King), Zool. Journ. iii. p. 426.

17. A. *ferruginea* (Pr. Max.) Pl. col. 199.

18. A. *passerinoïdes* (Temm.) Pl. col. 344.

19. A. *cunicularia* (Mol.) Pr. Bonap. Amer. Orn. pl. 7. f. 2. — Noctua urucurea *Less.* Audub. B. of Amer. pl. 412.; S. grallaria *Temm.* Pl. col. 146.

20. A. *Maugei* (Temm.) Pl. col. 46.

21. A. *cayanensis* (Gmel.) Pl. enl. 442.

22. A. *undulata* (Spix), Av. Bras. t. 10.

23. A. *lineata* (Shaw), Le Vaill. Ois. d'Afr. t. 41. — Strix huhula *Daud. Lath.*; S. albomarginata *Spix*, Av. Bras. t. 10.; Type of Ciccaba *Wagl.* (1832).

24. A. *torquata* (Daud.) Le Vaill. Ois. d'Afr. t. 42. — Strix superciliosa *Shaw.*

25. A. *siju* D'Orb. Voy. Isle de Cuba, Ois. t. 2.

26. A. *dominicensis* (Gmel.) Azara No. 45.

27. A. *melanotus* Tschudi, Faun. Peruana, p. 6. — Strix hylophila *Temm. ? ?*

28. A. *Novæ Zealandiæ* (Gmel.) — Strix fulva *Forst.* Desc. Anim. p. 71. et Icon. ined. 39.; Noctua zealandica *Quoy et Gaim.* Voy. de l'Astrol. Ois. t. 2. f. 2.

29. A. *maculata* (Vigors & Horsf.) Gould, Linn. Trans. xv. 189., Gould, Syn. B. of Austr. pl. f. head.

30. A. *boobook* (Lath.) Gould, Syn. B. of Austr. pl. f. head.

31. A. *connivens* (Lath.) G. R. Gray. — Athene? fortis *Gould*, Syn. B. of Austr. pl. f. head.

32. A. *strenua* Gould, Proc. Z. S. 1837. 141., Syn. B. of Austr. pl. f. head.

33. A. *albifacies* G. R. Gray, Voy. Ereb. and Terr. Birds, p. 2. pl. 1.

34. A. *frontata* Less. Tr. d'Orn. p. 107.

35. A. *gnoma* (Wagl.) Isis, 1832. p.

36. A. *punctulata* (Quoy et Gaim.) Voy. de l'Astrol. Ois. t. 1. f. 1.

37. A. *variegata* (Quoy et Gaim.) Voy. de l'Astrol. Ois. t. 1. f. 2.

38. A. ———. — Voy. au Pole Sud, Ois. t. 3. f. 1.

39. A. ———. — Voy. au Pole Sud, Ois. t. 3. f. 2.

40. A. ———. — Voy. au Pole Sud, Ois. t. 4. f. 1.

41. A. ———. — Voy. au Pole Sud, Ois. t. 4. f. 2.

42. A. ? *nudipes* (Daud.) Ornith. ii. 199., Vieill. Ois. de l'Amér. Sept. t. 16.

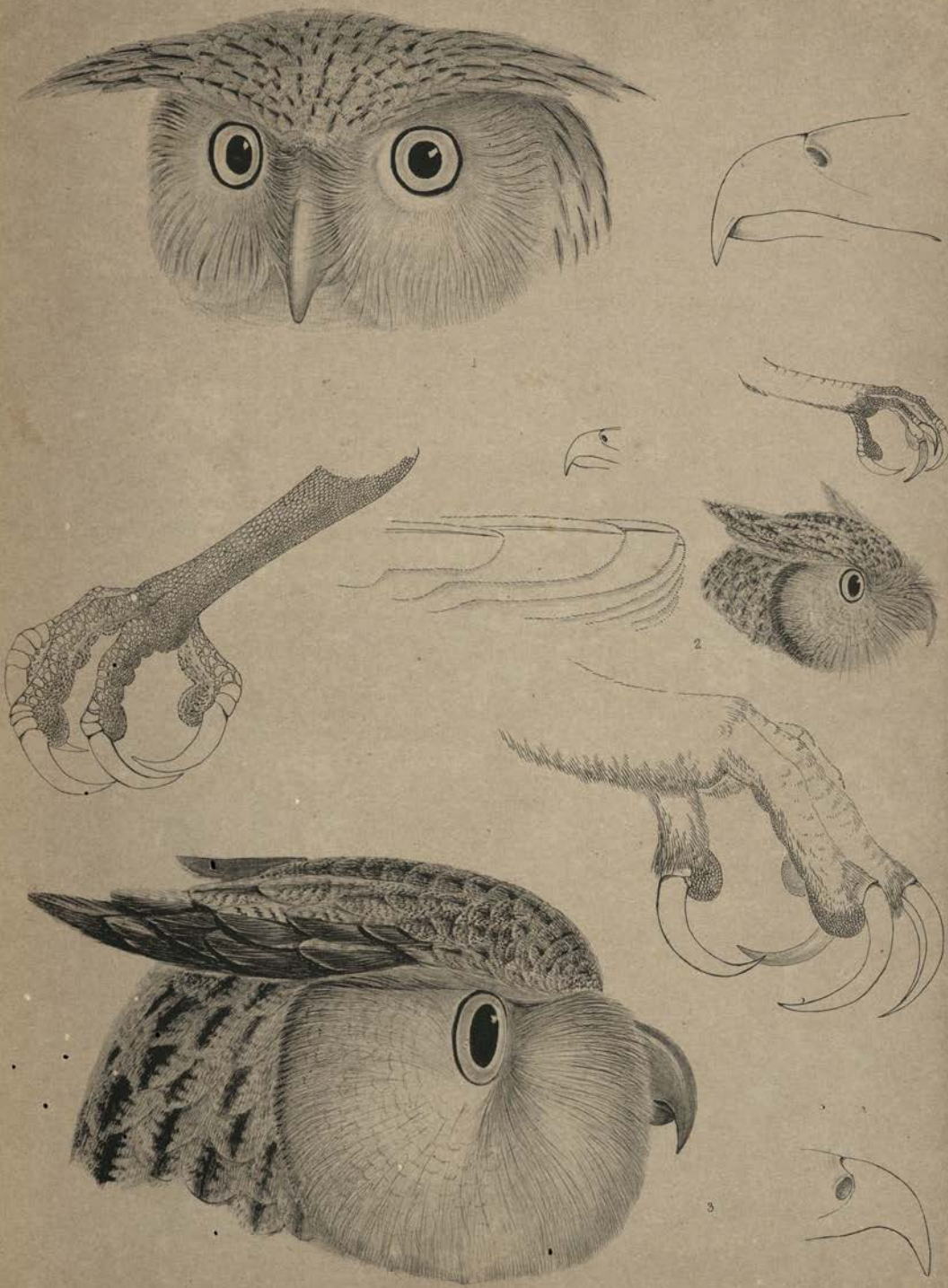
43. A. *phalænoides* (Daud.) Vieill. Ois. de l'Amér. Sept. t. 15.

44. A. *meridionalis* Risso, Hist. Nat. d'Eur. Mér. iii. 32.

August, 1845.

C. Hollmandrit Patent Lithogr.

BUBO
cinereus Eversm.



C. Hullmandel's Patent Lithogr.

1. KETUPA ceylonensis. 2. EPHIALTES asicapilla. 3. BUBO maximus.

The second Subfamily,

BUBONINÆ, or HORNED OWLS,

have the head large, broad, flat on the top, and furnished with two prominent tufts; and the facial disk imperfect above the eyes.

BUBO *Sibb.**

Bill moderate, broad and concealed at the base, and compressed on the sides; the culmen curved to the tip, which is hooked and acute; the lateral margins slightly sinuated; the nostrils placed in the fore part of the cere, and hidden by the projecting plumes, large, oval, or rounded. *Wings* rather long, with the second, third, and fourth quills nearly equal and longest. *Tail* moderate and rounded. *Tarsi* short, thick, and densely plumed. *Toes* moderate and thickly plumed; the tip of each toe furnished with two or three transverse scales, which are more or less concealed by the plumes; the lateral toes unequal; the hind toe short; the claws long, strong, and curved.

These large birds inhabit most parts of the world, regardless of the climate. They frequent old buildings, holes in the sides of the trees, precipitous hills and ravines of the mountains, or they may be seen in the deep shades of the swamps of large forests. Their food is sought for chiefly during the night, and consists of small mammalia, birds, lizards, and the larger kinds of insects. Some of the species have been observed watching for fish, which they strike at and seize with their foot. During the night they emit a loud prolonged hoot, and when alarmed they hiss, and make a loud snapping noise with their bill. The nests are built amidst ruins, in rocks, in the hollows or fork of a tall tree; and are formed of sticks piled in considerable quantities, lined with dry leaves and a few feathers. The female usually lays from two to four eggs.

1. B. *maximus* Sibb. — Strix bubo *Linn.* Pl. enl. 435.; Bubo atheniensis *Daud.*; B. europæus *Less.* Gould, B. of Eur. pl. 37.
2. B. *sibiricus* Eversm.
3. B. *capensis* Daud. Tr. d'Orn. p. 209., Le Vaill. Ois. d'Afr. t. 40., Ill. S. Afr. Zool. Birds, pl. 70.
4. B. *ascalaphus* Sav. Desc. de l'Egypte, Ois. t. 3. f. 2., Gould, B. of Eur. pl. 38., Pl. col. 57. — Type of Ascalaphia *I. Geoffr.* (1837).
5. B. *lacteus* (Temm.) Pl. col. 4.
6. B. *cinerascens* Guer. Rev. Zool. 1843. 321.
7. B. *orientalis* (Horsf.) Linn. Trans. xiii. 174. — Strix sumatrana *Raffl.*; Str. strepitans *Temm.* Pl. col. 174. 229.; Bubo (Huhua) nipalensis *Hodgs.*; Type of Huhua *Hodgs.* (1837).
8. B. *pectoralis* (Jerd.) Madr. Journ. Lit. & Sci. 1839. 89. pl. 1.
9. B. *coromander* (Lath.) Gray, Ill. Ind. Zool. pl. 20. — Urrua umbrata *Blyth.* ?
10. B. *bengalensis* (Frankl.) Proc. Z. S. 1831. 115., Gould, Cent. of Birds, pl. 3. — Bubo cavearius *Hodgs.*; Type of Urrua *Hodgs.* (1837).
11. B. *sultaneus* Less. Tr. d'Orn. p. 115.
12. B. *virginianus* (Gmel.) Less. Wils. Orn. pl. 50. f. 1. — Bubo pinicola *Vieill.* Ois. d'Amér. Sept. t. 19.; B. arcticus *Rich. & Swains.* Faun. Bor. Amer. pl. 30., Audub. B. of Amer. pl. 61.; Strix magellanicus *Gmel.* Pl. enl. 385.; Str. macrura *Vieill* Azara No. 42.; Type of Heliaptex *Swains.* (1837).

* Established by Sibbald in 1684 (*Scotia illustrata*). In 1830 M. I. Geoffroy separated a species under the name of *Ascalaphia*. In 1837 Mr. Swainson proposed *Heliaptex*, and in the same year Mr. Hodgson adopted two divisions under the names of *Huhua* and *Urrua*; these he changed in 1841 to *Etoglaux* and *Mesomorpha*.

Ephialtes *Keys. & Bl.**

Bill moderate, the base concealed and broad, the sides compressed, with the culmen flattened at the base, and curved to the tip, which is hooked ; the lateral margins curved ; the nostrils rounded, placed in the fore part of the cere, and covered by the basal plumes. *Wings* long, with the second, third, and fourth quills nearly equal and longest. *Tail* short, and more or less even. *Tarsi* rather long, and covered with short plumes to the base of the toes. *Toes* long, covered with small scales at the base, and with three or four transverse scales at the tip ; the claws moderate, strong, and curved.

These small owls are found in the warmer parts of both hemispheres. They frequent wooded districts, where they remain concealed during the day, but towards evening they sally forth in search of their food; which consists of the smaller kinds of field mammalia and insects. The eggs are generally from four to six in number, and are deposited on the bare wood in the hollow of a tree.

1. E. *scops* (Linn.) Pl. enl. 486. — Strix zorea *Cetti ;* S. giu *Scop.* ; S. carniolica *Gmel.* ; Scops europæus *Less.* ; Sc. Aldrovandi *Ray ;* Sc. senegalensis *Swains.* ; Sc. capensis *Smith,* Gould, B. of Eur. pl. 48. ; Sc. pennata *Hodgs.* ; Otus Scops japonicus *Temm. & Schl.* Faun. Japon. t. 9.
2. E. *surnia* (Hodgs.) As. Res. xix. 175.
3. E. *lempiji* (Horsf.) Linn. Trans. xiii. 140. — Strix noctula *Reinw.* Pl. col. 99. ; Scops lettia *Hodgs.* ; Sc. javanica *Less.* ? Str. bakhamuna *Penn.* ?
4. E. *semitorques* (Temm. & Schl.) Faun. Japon. p. 25. t. 8.
5. E. *magicus* (Temm. & Schl.) Faun. Japon. p. 25.
6. E. *mantis* (Temm. & Schl.) Faun. Japon. p. 25.
7. E. *minadensis* (Quoy & Gaim.) Voy. de l'Astrol. Ois. t. 2. f. 2.
8. E. *leucotis* (Temm.) Pl. col. 16.
9. E. *asio* (Linn.) Wils. Amer. Orn. pl. 24. f. 1. — Strix nævia *Gmel.* Wils. Amer. Orn. pl. 19. f. 1., Pl. col. 80. ; Scops carolinensis *Briss.* Vieill. Ois. d'Amér. Sept. t. 21., Audub. B. of Amer. pl. 97.
10. E. *choliba* (Vieill.) Ency. Méth. 1279. — Strix decussata *Licht.* ; Str. crucigera *Spix,* Av. Bras. t. 9., Azara No. 48.
11. E. *atricapilla* (Natt.) Pl. col. 145.
12. E. *brasiliensis* (Temm. & Schl.) Faun. Japon. p. 25.
13. ? E. *portoricensis* Less. Tr. d'Orn. p. 107.
14. ? E. *lophotes* Less. Tr. d'Orn. p. 107.
15. E. *trichopsis* (Wagl.) Isis, 1832. p.
16. E. ? *nudipes* (Vieill.) Ois. de l'Amér. Sept. t. 22. — Strix psilopoda *Less.*
17. E. *cristata* (Daud.) Le Vaill. Ois. d'Afr. t. 48. — Type of Lophostrix *Less.* (1831).

Ketupa *Less.*†

Bill large, broad at the base, compressed towards the tip, which is hooked, the lateral margins slightly arched : the nostrils lateral, placed in the anterior part of the cere, and hidden by the projecting plumes. *Wings* moderate, with the third and fourth quills equal and longest. *Tail* short, and nearly even at the end. *Tarsi* rather long, covered at the base with down, and towards the tips with minute scales. *Toes* moderate, strong, covered with small scales, except at the tips, which are furnished with three or four transverse scales, the lateral toes unequal ; the claws long, strong, and curved.

These birds inhabit the mountainous and wooded districts of the continent and archipelago of India. They prefer the open country when in quest of food. Mr. Hodgson remarks that they fly well by day, are constantly found on the banks of rivers, and that their food consists of fish and crabs.

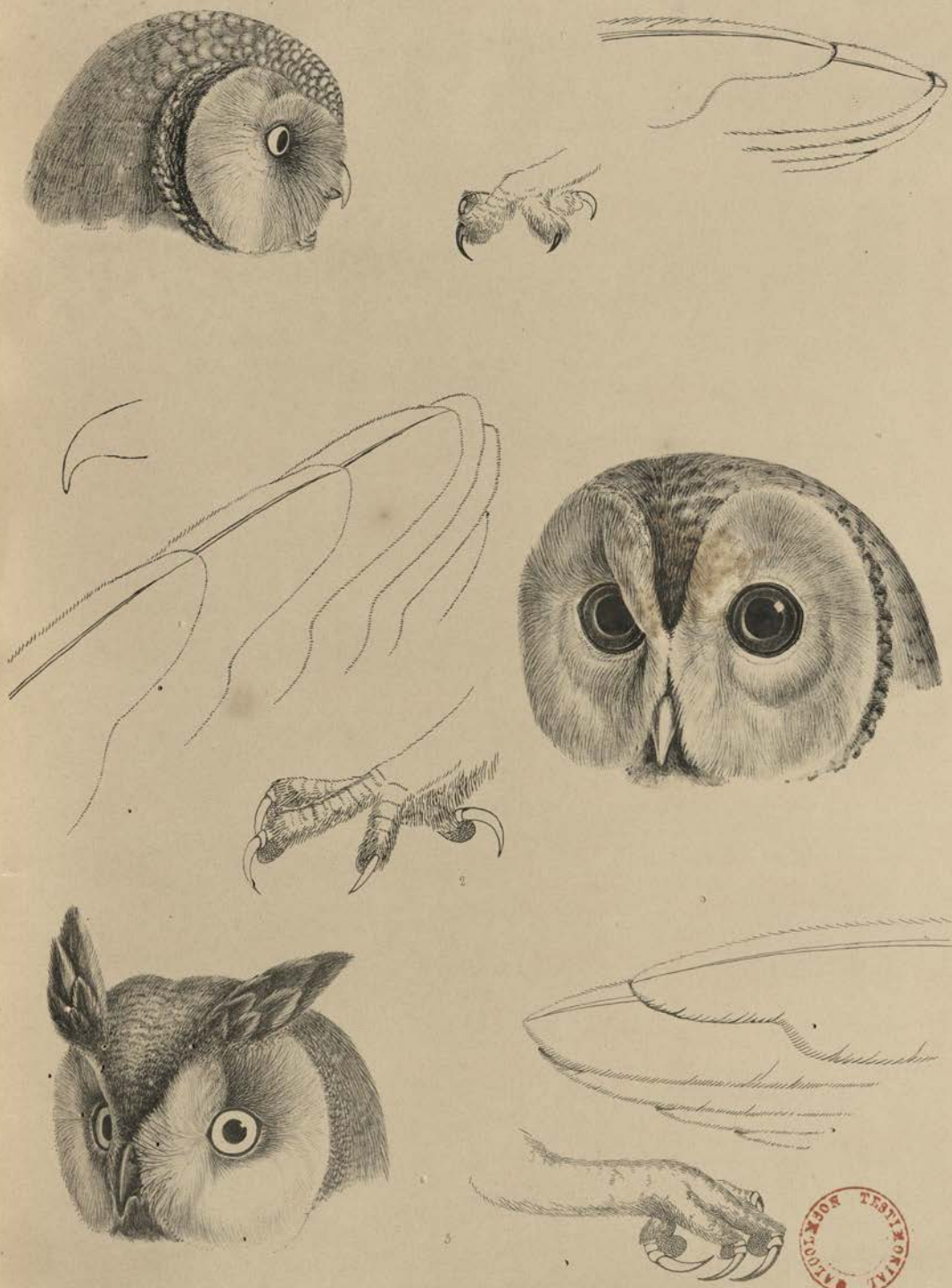
1. K. *ceylonensis* (Gmel.) Brown's Ill. pl. 4. — Strix Leschenaultii *Temm.* Pl. col. 20. ; Str. Hardwickii *Gray,* Ill. Ind. Zool. pl. 31. ; Cultrunguis nigripes *Hodgs.*
2. K. *javanensis* Less. — Strix ketupa *Horsf.* ; Str. ceylonensis *Temm.* Pl. col. 74.
3. K. *flavipes* (Hodgs.) Journ. As. Soc. Beng. 1836. 364.

* Established by Count Keyserling and Dr. Blasius in 1840 (*Wirbelthiere Europas*) in the place of *Scops,* which Savigny proposed in 1809, as that word had been previously employed by Mœhring in 1752.

† Established by M. Lesson (*Traité d'Ornith.* p. 114.) in 1831. Mr. Hodgson, in 1836, proposed *Cultrunguis* for the same set of birds.

C. Bullmandel's Patent Lithotint.

SYRNIUM
newarense. (Hodg.)



TESTIMONIAL BALCOLMSON

C. Hallmandel's Patent Lithotint

1. NYCTALE Tengmalmi 2. SYRNIUM aluco. 3. OTUS vulgaris.

The third Subfamily,

SYRNIINÆ, or OWLETS,

have the head large, smooth, and furnished with two small tufts, and the facial disk moderate and complete, or nearly so.

SYRNIUM *Sav.**

Bill moderate, strong, with the base broad, and concealed by the frontal plumes; the sides compressed, and the culmen arched to the tip, which is hooked; the nostrils basal, lateral, and medial, with the opening large and oval. *Wings* long and rounded, with the fourth and fifth quills equal and longest. *Tail* long, broad, and more or less rounded. *Tarsi* short, strong, thick, and densely clothed with plumes. *Toes* moderate, densely plumed to the end of each toe; the claws long, acute, and slightly curved.

These birds are found in various parts of the world, even in very high latitudes, hunting in the shady woods and thick plantations for a short time before the sun sinks below the horizon, but hiding themselves during the rest of the day in ruins and hollow trees. In the northern latitudes they are frequently seen flying about even at midday, and their flight is gliding and noiseless. They have been observed in flocks of forty individuals together, flying, or sitting in some exposed situation. Small quadrupeds are their principal food, though they sometimes seize upon birds, and occasionally on fish, all of which they strike with their foot. They build amidst rocks, or on lofty trees; and the nest is constructed of a considerable quantity of sticks, lined with dry leaves and a few feathers. The eggs are usually two or four in number. The females sometimes deposit their eggs in the deserted nests of other birds.

1. S. *aluco* (Linn.) Boie, Pl. enl. 441.— Strix stridula *Linn.* Pl. enl. 137.; S. sylvestris, S. alba, S. noctua, et S. rufa *Gmel.*; Syrnium ululans *Sav.* Gould, B. of Eur. pl. 47.
2. S. *cinereum* (Gmel.) Pr. Bonap. Gould, B. of Eur. pl. 24.— Strix lapponica *Retz.* Sparr. Mus. Carls. t. 5.; S. barbata *Palk.*; S. acclamator *Bartr.*; S. fuliginosa *Shaw*, Faun. Bor. Amer. Birds, pl. 31., Audub. B. of Amer. pl. 351.
3. S. *uralense* (Pall.) Lepechin, Voy. ii. 187. t. 3. — Strix liturata *Retz.* Pl. col. 27.; S. macroura *Natt.*; Type of Ptynx *Blyth* (1840).
4. S. *fuscescens* Temm. & Schl. Faun. Jap. t. 10.
5. S. *ocellatum* Less. Rev. Zool. 1839. 289.
6. S. *newarense* (Hodgs.) As. Res. xix. 168. — Strix indranee *Sykes?* Bulaca monticola *Jerd.*; Type of Bulaca *Hodgs.* (1837).
7. S. *sinense* (Lath.) — Strix orientalis *Shaw*, Gray, Ill. Ind. Zool. pl. i. 21.
8. S. *seloputo* (Horsf.) Linn. Trans. xiii. — Strix pagodarum *Temm.* Pl. col. 230.
9. S. *nebulosum* (Gmel.) Cuv. Gould, B. of Eur. pl. 46., Wils. Amer. Orn. pl. 33. f. 2., Vieill. Ois. d'Amér. t. 17., Audub. B. of Amer. pl. 46. — Type of Ulula *Cuv.* (1817).
10. S. *mieropthalmum* Tyzenk. Ornith. Bowsz.
11. S. *hylophilum* (Temm.) Pl. col. 373.

OTUS *Cuv.*†

Bill moderate, mostly concealed by the frontal plumes, broad at the base and compressed on the sides; the culmen curved towards the tip, which is acute; the nostrils lateral, medial, and hidden by the

* Established by Savigny in 1809. In 1829 M. Kaup used *Aluco*, and in 1837 Mr. Swainson proposed *Scotiaptex* for the same birds. It embraces Mr. Hodgson's genus *Bulaca* (1837), which he changed to *Mesecides* in 1841; and also *Ulula* of Cuvier (1817), and *Ptynx* (1840) of Mr. Blyth.

† It was in 1799 or 1800 that Cuvier established this genus. *Asio* of Mr. Strickland, *Brachyotus* of Mr. Gould (1837), and *Ægolius* of Count Keyserling and Dr. Blasius (1840) are synonymous with the name employed. It also includes *Nyctalops* of Wagler (1832).

plumes. *Wings* very long, with the second and third quills the longest. *Tail* moderate and even. *Tarsi* long, and covered with plumes. *Toes* moderate, more or less plumed, the lateral ones unequal, the outer one shortest; the claws long, curved, and acute.

These birds are found scattered in most parts of both hemispheres. They mostly frequent woods, plantations, and thick bushes of holly and ivy; some species, however, prefer the long grass or rushes of the moors and heaths, and they are even sometimes observed in the open cultivated fields. Their flight is rather rapid, easy, and graceful. They principally prey on small mammalia and birds. Some species lay their eggs in the deserted nests of other birds; others make a nest on the ground in the midst of heath, scraping a slight hollow, in which the eggs are deposited. They are usually four or five in number.

1. O. *vulgaris* Flem. — Strix otus *Linn.* Pl. enl. 29.; Otus europæus *Steph.*; O. communis *Less.*; Strix soloniensis *Gmel.*

2. O. *Wilsonius* Less. — Otus americanus *Pr. Bonap.* Wils. Amer. Orn. pl., Audub. B. of Amer. pl. 383.

3. O. *brachyotus* (Gmel.) Pl. enl. 438. — S. ægolius, S. ulula, et S. accipitrina *Pall.*; S. arctica *Sparrm.*; S. tripennis *Schrank*; S. palustris *Smies*; S. brachyura *Nils.*; Brachyotus palustris *Gould*, B. of Eur. pl. 40., Audub. B. of Amer. pl. 410.

4. O. *galapagoensis* Gould, Proc. Zool. Soc. 1837. 18., Voy. of Beagle, Birds, pl. 3.

5. O. *maculosus* (Vieill.) Less. N. Dict. Hist. Nat. vii. 44., Gal. des Ois. t. 23*. — Strix africana *Temm.* Pl. col. 50.

6. O. *crassirostris* (Vieill.) N. Dict. Hist. Nat. vii. 44. — Strix macrorhyncha *Temm.* Pl. col. 64.

7. O. *capensis* A. Smith, S. Afr. Quart. Journ. 1835. 306., Ill. S. Afr. Zool. pl. 67.

8. O. *abyssinicus* Spier. Rev. Zool. 1843. 321.

9. O. *signapa* D'Orb. Voy. l'Ile de Cuba, t. 2.

10. O. *mexicanus* (Gmel.) Cuv. — Strix clamator *Vieill.* Ois. d'Amer. Sept. t. 20.; S. longirostris *Spix*, Av. Bras. t. 9. a.; S. americana *Gmel.*; S. maculosa *Pr. Max.* Audub. B. of Amer. pl. 412.

11. O. *philippensis* G. R. Gray.

12. ? O. *stygius* (Wagl.) Isis, 1832. — Type of Nyctalops *Wagl.* (1832).

Nyctale *Brehm.*†

Bill small, the base hidden by the frontal plumes; the culmen arched to the tip, which is hooked and acute, and the sides compressed; the nostrils small, transverse, and oval, and placed in the tumid cere. *Wings* moderate and rounded, with the third and fourth quills nearly equal and longest. *Tail* lengthened and slightly rounded. *Tarsi* short, and clothed with long hairy feathers. *Toes* moderate, and densely covered with hairy feathers; the claws moderate, curved, and acute.

These birds are found in Europe and North America, where they inhabit the pine forests. As the sun declines below the horizon, they become all life and activity, and hunt the ground for mice and beetles. The nest is built of grass, and is generally placed in holes or clefts of pine trees; the female lays two eggs.

1. N. *Tengmalmi* (Gmel.) Strickl. — Strix dasypus *Bechst.*; S. funerea (*Linn.*) Nils. Gould, B. of Eur. pl. 49., Gal. des Ois. t. 23.

2. N. *Richardsoni* Pr. Bonap. — Strix Tengmalmi *Richards. & Swains.* Faun. Bor. Amer. pl. 32., Audub. B. of Amer. pl. 380.

† M. Brehm established this genus in 1828; but it was originally proposed by Savigny, in 1809, under the name of *Noctua*, which, however, had been previously employed. Mr. Swainson, in 1837, used *Scotophilus* for the same birds.

H. C. Richter del. Hullmandel & Walton, Lithographers.

STRIX
javanica Gmel

1

2

H. C. Richter del.

Hullmandel & Walton Lithographers.

1. PHODILUS badius 2. STRIX flammea

The fourth Subfamily,

STRIGINÆ, or Owls,

have the head smooth, with the facial disk very large, subtriangular, and complete.

Strix *Linn.**

Bill long, mostly concealed at the base by the projecting plumes; the sides much compressed, and the culmen arched to the tip, which is acute and hooked; the nostrils large, partly covered by a membrane, with the opening oval, and slightly hidden by the hairs. *Wings* very long, with the second quill the longest. *Tail* short and generally even. *Tarsi* much longer than the middle toe, slender, and covered with short soft plumes. *Toes* long, and covered with scattered hairs; the lateral ones unequal, the outer much shorter than the inner; the hind toe short and thick: the claws long, curved, and acute.

These birds inhabit the world generally. Their habits are strictly nocturnal; the softness of their plumage and the peculiar form of their quills give them a buoyant and noiseless flight, which enables them to steal upon their prey unsuspected. It consists of mice and other small quadrupeds, which they swallow whole. The hairs, bones, and other indigestible parts, are ejected in oval pellets by the mouth. Some species live on crustaceous animals. The nests are formed in old towers, tops of churches, the thatch of barns, and in the hollows of trees. The females lay from three to five eggs.

1. S. *flammea* Linn. Pl. enl. 440., Gould, B. of Eur. pl. 36.
2. S. *pratincola* Pr. Bonap. — Strix flammea *Wils.* Amer. Orn. pl. 50. f. 2.; S. americana *Aud.* B. of Amer. pl. 171.
3. S. *personata* Vigors, Proc. Z. S. 1831. 60. — Strix flammea *Vigors & Horsf.*; S. delicatula *Gould*, Proc. Z. S. 1836. 140.
4. S. *longimembris* Jerd. Journ. A. S. B. 1839. 86.
5. S. *javanica* (Gmel.).
6. S. *capensis* A. Smith, S. Afr. Quart. Journ. n. s. 1836., Ill. S. Afr. Zool. pl. 45.
7. S. *poensis* Fras. Proc. Z. S. 1842. 187.
8. S. *castanops* Gould, Proc. Z. S. 1836. 140.
9. S. *cyclops* Gould, Proc. Z. S. 1836. 140.
10. S. *punctatissima* G. R. Gray, Voy. of Beagle, Birds, p. 34. pl. 4.
11. S. *leucomanna* Eversm. Isis, 1839. 70.
12. S. *perlata* Licht. Cat. Dupl. Berl. Mus. p. 59. — Strix furcata *Temm.* Pl. col. 432.?

Phodilus *I. Geoffr.*†

Bill moderate; partly concealed by the projecting plumes; the culmen much arched to the tip, which is hooked and acute, and the sides compressed; the nostrils basal, lateral, with the opening oval. *Wings* long and rounded, with the fourth, fifth, and sixth quills nearly equal and longest. *Tail* short and rounded. *Tarsi* longer than the middle toe, and thickly clothed with plumes. *Toes* long; lateral ones

* Established by Linnæus in 1735 (*Systema Naturæ*).
† Established by Isidore Geoffroy in the *Ann. des Sci. Nat.* xxi. p. 201.

unequal, the outer shorter than the inner; and all covered with scales: the claws long, very strong, and slightly curved.

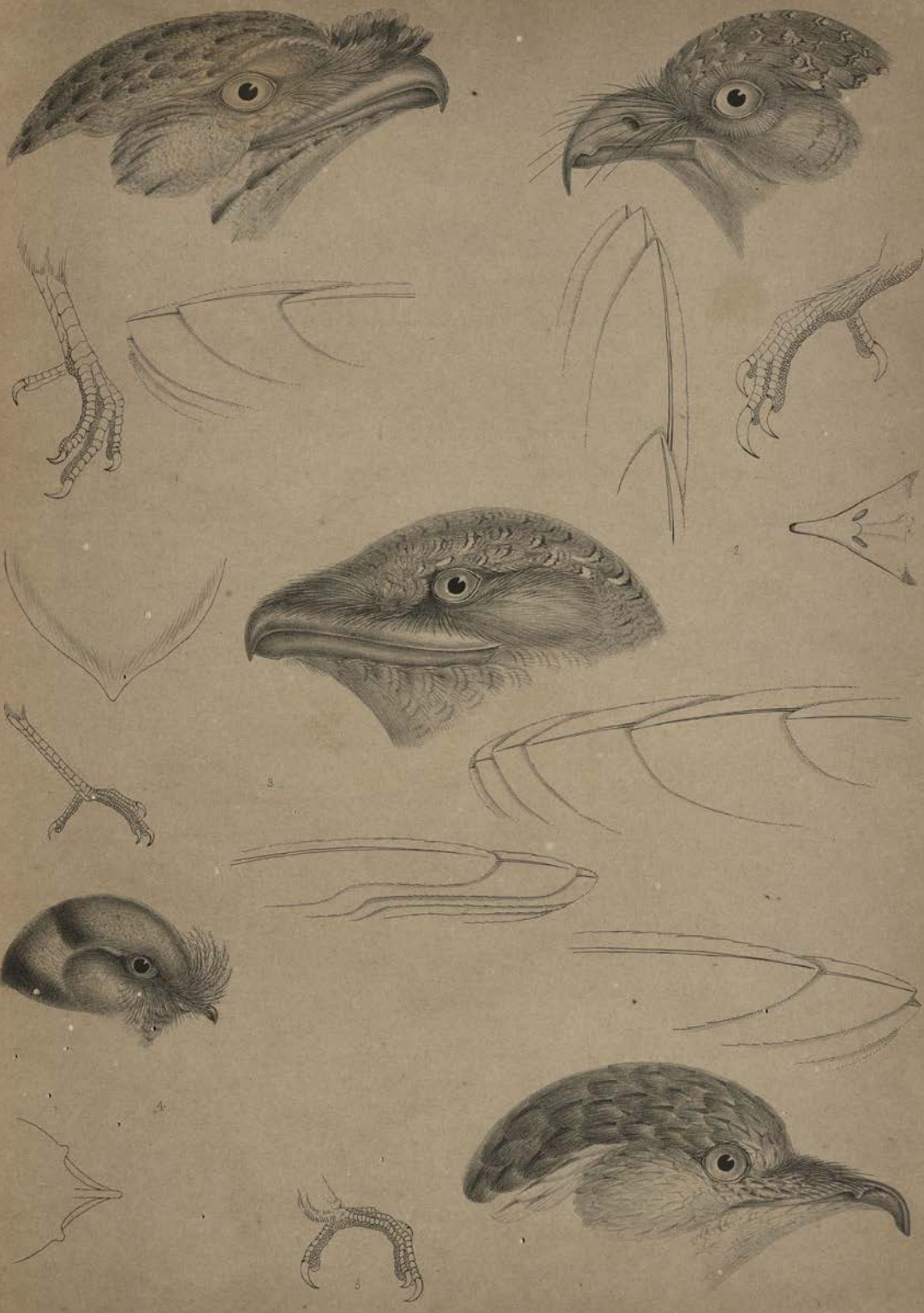
The type of this genus is found in Java and the northern parts of the continent of India. In the former place it resides, says Dr. Horsfield, in the closest forests, which are the usual resort of the tiger. The natives even assert that the bird has no dread to alight on the tiger's back.

P. *badius* (Horsf.) I. Geoffr. Zool. Res. in Java, pl.

November, 1845.

Hullmandel & Walton Lithographers

NYCTIBIUS
grandis Gm.



Hollmandel & Walton Lithographers

1. PODARGUS phalenoides 2. STEATORNIS caripensis 3. BATRACHOSTOMUS nuntius.
4. ÆGOTHELES cristatus 5. NYCTIBIUS pectoralis

Order II. PASSERES *

consists of a numerous series of birds, whose feet are more or less constructed for perching. The Toes are generally placed three before and one behind, though sometimes the posterior one is capable of being brought forwards, and sometimes the outer toe is carried backwards, which occasions the toes to be placed two before and two behind.

The first Tribe,

FISSIROSTRES, or Fissirostral Birds,

have the Bill very wide, and the gape extended beneath the eyes; with the culmen short, and curved to the tip. The feet of these birds are weak, and of various conformations.

The first Subtribe,

FISSIROSTRES NOCTURNÆ, or Nocturnal Fissirostral Birds,

are remarkable for the size of their eyes, which are very large, and easily dazzled by the light of day. Their plumage is generally soft, which enables them to fly without noise.

The first Family,

CAPRIMULGIDÆ, or Goatsuckers,

have the Bill short, more or less depressed, very broad, and the gape extending beneath each eye; the Tarsi very short, and more or less exposed; the Toes long and rather strong, the hind toe closely united to the base of the inner toe.

The first Subfamily,

STEATORNINÆ, or Oil-Birds,

have the Bill short, and usually strong, with the culmen curved to the tip, which is hooked; the sides dilated, and the gape very wide; and the base of the bill covered with projecting plumes and bipectinated bristles.

* *Picæ* (pars) of Linnæus, *Passeres* of Cuvier, and *Insessores* of Vigors are synonymous.

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Steatornis *Humb.**

Bill as long as the head, strong, elevated, and broad at the base, with the culmen much curved and rounded; the sides compressed to the tip, which is hooked and acute; the lateral margins nearly straight, and strongly dentated near the tip; the gonys short and slightly curved; the nostrils large, with the opening oblong, placed in the middle, and pierced in the substance of the bill; the base of the upper mandible furnished with very long strong bristles, with their bases slightly pectinated. *Wings* very long and pointed, with the third and fourth quills equal and longest. *Tail* long, broad, and graduated. *Tarsi* very short, thick, and covered only with a few scattered hairs. *Toes* long and slender, with the outer toe rather longer than the inner, and free at its base; the hind toe short: the claws long, curved, and acute.

It is in the caverns on the sea shore of the Islands of Guadaloupe and Trinidad, as well as under the natural bridge of Pandi near Bogotà, that the bird which constitutes this genus is found. Its food consists of the fruits of a plant called *Semilla del Guacharo*, which occasions the birds to become so excessively fat, that that substance is compared to olive oil, and as such is permitted to be used during Lent by the Catholic natives. The noise emitted by the bird is hoarse and sharp. It avoids the light of day, and only appears during the night or at least after sunset. The nest is built on the surface of the rock. It is slightly hollowed out, and when fresh formed it has a margin of down, but which becomes matted together with masticated matter deposited by the bill of the bird and beat up with its feet.

S. *caripensis* Humb. Ann. du Mus. 1834. t. 15. — Caprimulgus steatornis *Humb.* Journ. Phys. 1800. p.

Podargus *Cuv.*†

Bill large and rather depressed, with the culmen much curved, and the sides suddenly compressed at the tip, which is hooked and acute; the lateral margins curved, entire, and overlapping that of the lower mandible, which is suddenly curved downwards at the tip; the gonys very short and straight; the nostrils lateral, placed in the middle of the bill, and covered by a membranous scale, with the opening linear and slightly oblique; the base of the upper mandible is entirely covered by the bipectinated bristles. *Wings* long and pointed, with the second and third quills equal and longest. *Tail* lengthened, and more or less graduated. *Tarsi* robust, short, and broadly scaled. *Toes* long, with the outer toe rather longer than the inner, and strongly scaled above; the hind toe rather short, and all broadly padded beneath: claws moderate, compressed, curved, and acute.

These singular birds are found in Australia and New Guinea, where they are scattered throughout, regardless whether it be in the thick brushes, or in the thinly wooded plains. They also inhabit the low swampy islands, studding the mouths of the rivers. They are generally seen in pairs, quietly seated on the dead branches during the day, or hidden

* Established by Baron Humboldt in 1817.
† Established by Cuvier in 1829 (*Règne Animal*, i. p. 398.).

in the hollow trunks of trees, but on the approach of evening they become very active. Mr. Gould is induced to believe that they are in the habit of creeping among the branches in search of insects that are in a state of repose, such as Phasmidæ, Cicadæ, and Coleoptera; he also found in their stomachs the fibres of the roots of what appeared to be a parasitic plant. They utter at night a loud hoarse noise, consisting of two distinct sounds. The nest is composed of sticks slightly interwoven together, and placed at the fork of a horizontal branch of a tree. The female usually deposits two eggs.

1. P. *cinereus* (Cuv.) Règ. An. ii. p. 172. t. 4. f. 1., Vieill. Gal. des Ois. t. 123. — P. Cuvieri *Vig. & Horsf.* Less. Tr. d'Orn. t. 33. f. 1.; Caprimulgus podargus *Dum.*
2. ? P. *strigoides* (Lath.) Lamb. Icon. ined. 67.
3. P. *Stanleyanus* Vig. & Horsf. Linn. Trans. xv. p. 197.
4. ? P. *gracilis* (Lath.) Lamb. Icon. ined. 69.
5. ? P. *megacephalus* (Lath.) Lamb. Icon. ined. 68.
6. P. *humeralis* Vig. & Horsf. Linn. Trans. xv. p. 198., Gould, B. of Austr. pl., Jard. & Selby, Ill. Ornith. pl. 88.
7. P. *phalænoides* Gould, Pr. Z. S. 1839. p. 142., B. of Austr. pl.
8. P. *brachypterus* or *macrorhynchus* Gould, Proc. Z. S. 1840. p. 163.
9. P. *papuensis* Quoy, & Gaim. Voy. de l'Astrol. Ois. t. 13.
10. P. *ocellatus* Quoy. & Gaim. Voy. de l'Astrol. Ois. t. 14.

Batrachostomus *Gould.**

Characters resembling those of Podargus; but with the *Wings* long and rounded, with the sixth quill the longest; and the *Toes* rather short, with the outer toe longer than the inner.

These birds are found in the islands of the Indian Archipelago.

1. B. *javanensis* (Horsf.) Linn. Trans. xiii. p. 141., Zool. Res. pl.
2. B. *cornutus* (Temm.) Pl. col. 159.
3. B. *auritus* (Vigors), Raffl. Mém. App. p. 652., Griff. An. Kingd. ii. pl. p. 114., Gould, Icon. Av. pl. — Podargus Fullertoni *Hay*, Journ. As. Soc. Beng. 1842. p. 798.
4. B. *stellatus* (Gould), Proc. Z. S. 1837. p. 43.

Ægotheles *Vig. & Horsf.*†

Bill small, weak, and much depressed, with the culmen much arched and compressed, especially at the tip, which is hooked and obtuse; the lateral margins nearly entire and curved; the nostrils placed in the middle, with the opening oblique and rather spatuliform, narrowing behind; the base of the bill concealed by the projecting plumes and lengthened bipectinated bristles. *Wings* moderate and rounded, with the third and fourth quills equal and longest. *Tail* rather long and graduated. *Tarsi* rather longer than the middle toe, slender, and covered with transverse scales. *Toes* long, slender, and free, with the outer toe longer than the inner; the hind toe long: the claws compressed and acute.

The species of this genus are found in most parts of Australia, where they equally inhabit the forests, the densest brush, and the thinly wooded districts. They remain concealed during the day in the hollows of trees, and as the night approaches they fly about in search of various kinds of insects. If disturbed, they fly from tree to tree, either

* Established in 1838 by Mr. Gould (*Icones Avium*). *Bombycistomas* of Mr. Hay is synonymous.
† Vigors and Dr. Horsfield established this genus in 1825 (*Linn. Trans.* xv. p. 194.).

hiding in the hollows, or perching themselves on the branches. The eggs, which are five or six in number, are usually deposited on the bare wood in the hollows of trees.

1. Æ. *cristatus* (Lath.) White's Voy. pl. p. — Caprimulgus novæ hollandiæ *Lath.*; Ægotheles australis *Swains.*; Æ. lunulatus *Jard. & Selby*, Ill. Orn. pl. 149.; C. vittatus *Lath.*

2. Æ. *leucogaster* Gould, Proc. Z. S. 1844, p. 106., B. of Austr. pl.

Nyctibius *Vieill.**

Bill small, weak, and depressed, with the culmen much arched and compressed, especially at the tip, which is hooked and obtuse; the lateral margins curved, and armed with a strong, blunt, curved dentation; that of the lower mandible much curved, dilated, and advancing over that of the upper mandible; the gape extends far back, and is very wide; the base entirely covered by the projecting plumes and bipectinated bristles; the nostrils near the lateral margins, with the opening large, exposed, and spatuliform. *Wings* very long and pointed, with the second and third quills equal and longest. *Tail* very long, broad, and nearly even. *Tarsi* very short and plumose. *Toes* rather short, with the outer toe much longer than the inner, and all broadly padded beneath: the claws moderate, much curved, compressed, and acute.

It is in South America and Africa that the species of this genus are found. They are generally seen in pairs, perched on the dead branches of the high trees of the forests. They usually support themselves vertically by the assistance of the tail, in such a manner that half of their body passes over the trunk or branch; but, as their plumage is of the same colour, they are very difficult to be discovered while thus stationed. Sometimes they locate themselves in the hollows of trees during the day. It is in such places that the female deposits on the dust of the rotten wood her eggs, which usually consist of two. Azara mentions that they are cemented to the place by a gummy matter.

1. N. *grandis* (Gmel.) Vieill. Pl. enl. 325., Jard. & Selby, Ill. Orn. pl. 89.
2. N. *cornutus* (Vieill.) Lafr. N. Dict. d'Hist. Nat. ii. 245., Azara, No. 308.
3. N. *jamaicensis* (Gmel.) Lath. Syn. pl. 57.
4. N. *pectoralis* Gould, Icon. Av. pl.
5. N. *æthereus* (Pr. Max.) — C. longicaudatus *Spix*, Av. Bras. ii. t. 1.
6. N. *forficatus* (Vieill.) Lafr. Le Vaill. Ois. d'Afr. t. 47, 48. — Caprimulgus furcatus *Cur.*; Type of Selochusa *G. R. Gray* (1841).
7. N. *bracteatus* Gould, Proc. Z. S. 1846. p.

* Vieillot established this genus in 1806 (*Analyse, &c.* p. 38.). In 1840 the name was changed to *Nyctornis* by Nitzsch. It embraces my *Selochusa* (1841).

October, 1846.

WOLLASTON TESTIMONIAL

Hullmandel & Walton Lithographers

CAPRIMULGUS
semitorquatus. Gmel:

Wolf del. et lith.

Printed by Hullmandel & Walton.

1. ELBOTHREPTES anomalus. 2. CHORDEILES virginianus. 3. EUROSTOPODUS albiguularis. 4. NYCTIDROMUS Derbianus. 5. CAPRIMULGUS indicus.

The second Subfamily,

CAPRIMULGINÆ, or GOATSUCKERS,

have the Bill short and weak, with the gape extending under each eye, extremely broad, and furnished with more or less lengthened bristles; the Wings long, and usually pointed; the Tail more or less lengthened, and round, or graduated, and sometimes forked; the Tarsi more or less short, and almost clothed throughout with short plumes, or entirely denuded and scaled; the Toes moderate, with the lateral ones shorter than the middle toe, and of equal length: the Claws of the middle toe large, and pectinated on the sides; those of the other toes small.

CAPRIMULGUS *Linn.**

Bill very short, with the gape extending under the eyes, very wide, and furnished with long strong bristles; the culmen curved, and the sides much compressed to the tip, which is hooked and emarginated; the nostrils lateral, tubular, with the opening large, and partly exposed. *Wings* very long, and pointed; with the second quill the longest. *Tail* rather long, broad, and more or less rounded; or very long, and strongly forked. *Tarsi* shorter than the middle toe, strong, and more or less clothed with plumes. *Toes* strong; with the lateral toes short and equal; the hind toe very short; the middle toe long, and armed with a broad serrated claw.

The species of this genus are scattered in various parts of the world. They are migratory, and generally live in the woods or on the dry tracts of pasture land; but sometimes they are observed skimming round pools of stagnant water, and over the surface of rivers. They feed on moths and beetles, which they catch on the wing in the dusk of the evening or early in the morning, retiring to some dark recess among the brushwood during the day. During their rapid flight the mouth is widely extended and of enormous gape; besides which it is surrounded with long rigid bristles, serving to increase the space, and greatly to assist in the capture of their prey. They form no nest, but generally deposit two eggs in a dry spot beneath the shelter of ferns and other plants.

1. C. *europæus* Linn. Pl. enl. 193. — Caprimulgus punctatus *Meyer*; C. vulgaris *Vieill.* Gould, B. of Eur. pl. 51., Smith, Ill. Zool. S. Afr. Birds, pl.
2. C. *ruficollis* Temm. Man. d'Ornith. p. 438. — Caprimulgus rufitorques *Vieill.*
3. C. *rufigena* Smith, Ill. Zool. S. Afr. Birds, pl.
4. C. *tristigma* Rüpp. Faun. Abyss. p. 105. — Caprimulgus poliocephalus *Rüpp.* Syst. Uebers. Vog. t. 3.
5. C. *poliocephalus* Rüpp. Faun. Abyss. p. 106. — Caprimulgus tetrastigma *Rüpp.* Syst. Uebers. Vog. t. 4.
6. C. *infuscatus* Rüpp. Zool. Atlas, t. 6. — Caprimulgus nubicus *Licht.*
7. C. *isabellinus* Temm. Pl. col. 379. — Caprimulgus ægyptius *Licht.*
8. C. *eximius* Rüpp. Pl. col. 398.
9. C. *lentiginosus* Smith, Ill. Zool. S. Afr. Birds, pl.
10. C. *natalensis* Smith, Ill. Zool. Afr. Birds, pl.
11. C. *jotaka* Temm. & Schl. Faun. Japon. Ois. t. 12, 13.
12. C. *asiaticus* Gmel. — Caprimulgus pectoralis *Vieill.* Levaill. Ois. d'Afr. t. 49.

* Established by Linnæus in 1756. *Nyctichelidon* of Rennie (1831) is synonymous. It embraces *Antrostomus* of Mr. Gould (1838). and *Hydropsalis* of Wagler (1832).

13. C. *pallidus* J. E. Gray. Zool. Misc. p. 1.
14. C. *indicus* Lath. — Caprimulgus cinerascens *Vieill.*
15. C. *mahrattensis* Sykes, Proc. Z. S. 1832. p. 83.
16. C. *affinis* Horsf. Linn. Trans. xiii. p. 142.
17. C. *monticola* Frankl. Proc. Z. S. 1831. p. 116.
18. C. *furcifer* Vieill. — Caprimulgus psalurus *Temm.* Pl. col. 157.; Hydropsalis Azaræ *Wagl.*; Psalurus macropterus *Swains.*; Type of Hydropsalis *Wagl.* (1832).
19. C. *climacocercus* Tschudi, Fauna Peruana, t. 6. f. 1.
20. C. *trifurcatus* Tschudi, Fauna Peruana, p. 9.
21. C. *manurus* Vieill. N. Dict d'Hist. Nat. x. p. 243.
22. C. *enicurus* Vieill. N. Dict. d'Hist. Nat. x. p. ., Azara, No. 315.
23. C. *carolinensis* Briss. Catesb. Carol. pl. 8., Wils. Amer. Orn. pl. 54. f. 2., Audub. B. of Amer. pl. 52. — Caprimulgus rufus *Vieill.* Ois. d'Amér. Sept. t. 25.; Type of Antrostomus *Gould* (1838).
24. C. *vociferus* Wils. Amer. Orn. pl. 41. — Caprimulgus virginianus *Vieill.* Ois. d'Amér. Sept. t. 23., Audub. B. of Amer. pl. 82.
25. C. *Nuttalii* Audub. B. of Amer. 2d edit. pl. 495.
26. C. *cayanensis* Gmel. Pl. enl. 760. — Caprimulgus leucurus *Vieill.*; C. leopetes *Jard. & Selby*, Ill. Ornith. pl. 87.
27. C. *guianensis* Gmel. Pl. enl. 733. — Caprimulgus variegatus *Vieill.* Azara, No. 318.
28. ? C. *albicollis* Gmel. Azara, No. 310.
29. C. *odonpteron* Less. Rev. Zool. 1839. p. 105.
30. C. *brasiliensis* Gmel. Petiv. t. 59. f. 1. — Caprimulgus ocellatus *Tschudi*, Fauna Peruana, t. 5. f. 2.
31. C. *semitorquatus* Gmel. Pl. enl. 734. — Caprimulgus pruinosus *Licht.* Tschudi, Fauna Peruana, Ois. t. 6. f. 2.
32. C. *longirostris* Pr. Bonap. Journ. Acad. Sci. Phil. iv. p. 384.
33. C. *hirundinaceus* Spix, Av. Bras. t. 3. f. 1.
34. C. *leucopterus* Pr. Max. — Caprimulgus leucopygius *Spix*, Av. Bras. t. 3. f. 2.
35. C. *decussatus* Tschudi, Fauna Peruana, t. 5. f. 1.
36. C. *macromystax* Wagl. Isis, 1831. p. 533.
37. C. *parvulus* Gould, Voy. Beagle, Birds, p. 37.
38. C. *bifasciatus* Gould, Voy. Beagle, Birds, p. 37.
39. C. *exilis* Less. Rev. Zool. 1839. p. 44.
40. C. *torquatus* Gmel.
41. C. *griseus* Gmel.

Nyctidromus *Gould.**

Bill moderate, with the gape very wide where the lateral margins are dilated, and furnished with long slender bristles; the culmen curved, and the sides much compressed to the tip, which is hooked and emarginated; the base of the upper mandible with a few short bristles; the nostrils lateral, tubular, with the opening large and exposed. *Wings* moderate, with the third quill the longest. *Tail* lengthened, and graduated. *Tarsi* nearly as long as the middle toe, naked, and broadly scutellated in front. *Toes* moderate; with the lateral toes equal; the hind toe small, and armed with a small claw.

The typical species is found in South America.

N. *Derbyanus* Gould, Icones Avium, pl.

Eleothreptus.†

Bill moderate, with the culmen rather arched, and much compressed on the sides; the gape very wide, and furnished with long rigid bristles; the nostrils lateral, tubular, with the opening rounded and exposed. *Wings* moderate; with the first quill rather shorter than the second to the sixth, all of which are nearly equal and falcated; the ends of the seventh to the ninth lengthened and attenuated; the

* Established by Mr. Gould in 1838 (*Icones Avium*).
† This genus was originally established by Mr. Gould (1837), under the name of *Amblypterus*, which, having been employed in other branches of natural history, was changed by me to that above given in 1840.

eighth rather the longest. *Tail* very short, and even. *Tarsi* shorter than the middle toe, and scaled. *Toes* rather long, especially the middle toe, with the lateral ones equal; the hind toe short and slender.

The typical species was observed running about near pools of water in the interior of South America.

E. *anomalus* (Gould), Icones Avium, pl.

Chordeiles *Swains.**

Bill very small, with the gape very wide and furnished with a few very short hairs; the culmen arched, and the sides compressed to the tip, which is hooked and emarginated; the nostrils lateral, tubular, with the opening rounded and exposed. *Wings* lengthened and pointed, with the second quill the longest. *Tail* long, broad, and emarginated, or rounded. *Tarsi* shorter than the middle toe, and partly covered with plumes. *Toes* rather long; with the lateral toes equal; the hind toe short, slender, and armed with a short claw.

These species inhabit both North and South America, and are dispersed generally over the country from the sea-coast to the mountains in the neighbourhood; and in the vicinity of extensive salt marshes they are likewise very numerous, skimming over the meadows in the manner of swallows. The favourite time of activity is from about two hours before sunset until dusk. At this time they seem all vivacity, darting about in the air in every direction, making frequent, short, sudden turnings, as if busily engaged in catching insects. At other times one of these birds is seen to mount high in the air by alternate quick and leisurely motions of the wings, playing about as he ascends, uttering usually a hoarse squeak, till, in a few minutes, he again dives with the same impetuosity and violent sound as before. After they have paired, the male and female confine themselves to a particular spot, but each still roosts during the day on separate trees. The eggs are commonly two in number, and they are deposited on the bare ground.

1. C. *virginianus* (Briss.) Swains. Edwards's Birds, pl. 63. — Caprimulgus americanus *Wils.* Amer. Orn. pl. 40.; C. popetue *Vieill.* Ois. d'Amér. Sept. t. 24., Audub. B. of Amer. pl. 147.
2. C. *americanus* (Linn.) Sloan. Jamaica, t. 255. f. 1.
3. C. *acutipennis* (Bodd.) Pl. enl. 732. — Caprimulgus acutus *Gmel.*
4. C. *labeculatus* Jard. Ann. Nat. Hist. 1846, p. 119.
5. C. *rupestris* (Spix), Av. Bras. t. 2.
6. C. ? *rufus* (Gmel.) Pl. enl. 735.

Eurostopodus *Gould.*†

Bill short, with the gape very wide and furnished with short weak hairs; the culmen curved, and the sides compressed to the tip, which is hooked; the nostrils lateral and tubular, with the opening linear, and partly concealed by the frontal plumes. *Wings* very long, and pointed, with the second quill the longest. *Tail* long, broad, and rounded at the end. *Tarsi* shorter than the middle toe, and covered anteriorly for nearly their whole length with plumes. *Toes* short and thick; with the lateral

* Mr. Swainson established this genus in 1831 (*Fauna Boreali-Americana* p. 496.).
† Mr. Gould established this genus in 1837 (*Proc Zool. Soc.* p. 142.). It embraces *Lyncornis* of the same author (1838).

toe equal; the hind toe short, and the claws short, except that of the middle toe, which is long and pectinated.

The species of this genus inhabit India, its isles, and Australia. They migrate, and are therefore occasionally found in the open parts of the forest, or on cleared land, where during the twilight they skim about with great rapidity in search of nocturnal insects. During the day they remain quiet among the underwood, or on the shady side of a large tree, close to the root, and, if disturbed, seek their safety by flying to a branch of some high tree.

1. E. *albogularis* (Vig. & Horsf.) Gould, Linn. Trans. xv. p. 194. — Caprimulgus albimaculatus *Cuv.*; C. mysticalis *Temm.* Pl. col. 410.

2. E. *guttatus* (Vig. & Horsf.) Gould, Linn. Trans. xv. p. 192.

3. E. *macrourus* (Horsf. (?)) Gould, Linn. Trans. xiii. p. 142., Gould, B. of Austr. pl.

4. E.? *Wiederspergii* Reichenb. All. deuts. Naturh. Zeit. 1846. p. 270. t. 5.

5. E. *macrotis* (Vigors), Proc. Z. S. 1831. p. 97., Gould, Icones Avium, pl.

6. E. *Temminckii* Gould, Icones Avium, pl. — Caprimulgus pulcher *A. Hay*; C. imberbis *Temm.*

7. E. *cerviniceps* Gould, Icones Avium, pl. — Type of Lyncornis *Gould* (1838).

January, 1847.

Bulmandel & Walton's new Process

PODAGER
Gouldu G.R. Gray

1. MACRODIPTERYX longipennis. 2. PODAGER Nattereri. 3. SCOTORNIS climacurus.

The third Subfamily,

PODAGERINÆ, or PODAGERS.

have the Bill much depressed, and the culmen curved and compressed on the sides to the tip, which is hooked; the gape more or less furnished with bristles: the Wings long and pointed: the Tail more or less long and broad: the Tarsi usually long, more or less plumed, and, when bare, covered with transverse scales in front: the Toes unequal, with the inner toe generally longer than the outer, and both more or less united to the middle one, which is the longest of all, and armed with a long serrated claw.

SCORTORNIS *Swains.*

Bill broad at the base, and much depressed, with the apical portion of the culmen arched and compressed on the sides to the tip, which is hooked and acute; the gape furnished with strong bristles; the nostrils lateral, and partly clothed by the frontal plumes, with the opening covered by a membranous scale. *Wings* long and pointed, with the second or third quill the longest. *Tail* very long, broad, and graduated. *Tarsi* shorter than the middle toe, partly clothed with plumes, and the apical part covered with transverse scales. *Toes* unequal; the lateral ones shorter than the middle toe, and the inner toe longer than the outer: the claws short and curved, and that of the middle toe long and serrated.

The species of this genus are inhabitants of the continent of Africa, especially in the western portion. Their habits and manners have not yet been recorded by naturalists.

1. S. *climacturus* (Vieill.) Swains. Gal. des Ois. t. 112.—Caprimulgus longicaudus *Steph.*

2. S. *trimaculatus* Swains. B. of W. Afr. ii. p. 70.

MACRODIPTERYX *Swains.*†

Bill broad at the base, and much depressed, with the culmen arched at the apex, and the sides compressed to the tip, which is hooked and acute; the gape furnished with bristles which are nearly as long as the bill; the nostrils lateral, with the opening covered by a membranous scale. *Wings* long, reaching beyond the end of the tail, and pointed; with the first or second quill the longest, and the

* Established by Mr. Swainson in 1837 (*Classif. of B.* ii. p. 339.).

† Established by Mr. Swainson in 1837 (*Classif. of B.* ii. p. 339.). It embraces *Semeiophorus* of Mr. Gould (1838); which name was changed by me to *Cosmetornis* in 1840, as the former had been previously employed in zoology.

innermost quill extremely prolonged, and sometimes deficient of webs except at the end. *Tail* rather lengthened, and even or slightly emarginated at the end. *Tarsi* as long as, or longer than, the middle toe, robust, partly clothed with plumes, and the apical portion covered with transverse scales. *Toes* unequal; the lateral toes nearly equal, shorter than the middle toe, and united by a short membrane: the claws moderate and acute, that of the middle toe long and serrated.

The typical species is found in Western Africa, while Mr. Gould informs us that the second species inhabits the islands lying between those of Bourbon and Madagascar; it is also numerous, he says, on the shores of the Red Sea, and in the island of Socotra. Their habits and manners are unknown.

1. M. *longipennis* (Shaw), G. R. Gray, Nat. Misc. pl. 265.—Caprimulgus macrodipteryx *Afzel.*; Macrodipteryx africanus *Swains.*

2. M. *vexillarius* Gould, Icones Av. ii. pl. .—Type of Semeïophorus *Gould* (1838).

Podager *Wagl.**

Bill much depressed and broad at the base, with the culmen curved, and the sides compressed to the tip, which is hooked and acute; the nostrils lateral, with the opening oval and partly covered by scattered plumes. *Wings* long, reaching beyond the end of the tail, and pointed; with the first quill the longest. *Tail* short and even. *Tarsi* very short, and entirely clothed with plumes. *Toes* strong and unequal, with the lateral toe short, and the inner toe the longer of the two; both united at their base by a membrane to the middle toe, which is the longest, and armed with a moderate, curved, and serrated claw.

The species that compose this genus are found in the warmer parts of South America, where they frequent fields and moist places, usually in pairs, although they have sometimes been observed in troops of more than a hundred together, chasing insects in full daylight. The female deposits two eggs on the bare ground, without any kind of nest.

1. P. *nacunda* (Vieill.) N. Dict. d'Hist. Nat. x. p. 240.—Caprimulgus diurnus *Pr. Max.* Temm. Pl. col. 182.; C. campestris *Licht.*

2. P. *Nattereri* Temm. Pl. col. 107.

3. P. *Gouldii* G. R. Gray.

* Wagler established this genus in 1832 (*Isis*, 1832, p. 277.). *Proïthera* of Mr. Swainson (1837) is synonymous.

December, 1847.

C. Hullmandel's Patent Lithotint.

COLLOCALIA
troglodytes G.R.Gray.

The second Tribe,

FISSIROSTRES DIURNÆ, or Diurnal Fissirostral Birds,

are distinguished from the nocturnal series by the closeness of their plumage.

The second Family,

HIRUNDINIDÆ, or Swallows,

have the Bill short and weak, very broad at the base, and suddenly compressed to the tip; the Wings lengthened, narrow, and acute; the Tail more or less forked; and the Tarsi very short and weak.

The first Subfamily,

CYPSELINÆ, or Swifts,

have the Bill short, depressed, broad at the base, the sides suddenly compressed to the tip, and the margins inflected; the Nostrils large, and longitudinal on each side of the culmen; the Wings extremely long and curved; the Tarsi short and weak; the Toes short, thick, and armed with short, strong, and much curved claws; and the hind toe usually directed forwards.

Cypselus *Illig.**

Bill short and depressed, with the gape very wide, and the sides gradually compressed to the tip, which is curved; the nostrils basal, lateral, and large, with the opening longitudinal, on each side of the culmen, and the margins beset with small feathers. *Wings* lengthened, with the second quill longest. *Tail* moderate, forked, or uneven. *Tarsi* very short, and feathered to the base of the toes. *Toes* all directed forwards, short, thick, and armed with short, curved, and compressed claws.

These birds, of migratory habits, prefer the warmer parts of the world. They pass most of their days on the wing, for which their slender forms and lengthened wings are admirably constructed. Their flight is rapid, performed in lengthened sweeps or in extensive curves, with hardly any motion of their wings. The height of their flight is regulated by the state of the atmosphere: in fine weather they fly in numbers, at a great elevation in the air; but, during gloomy and damp weather, they perform their evolutions closer to the ground. They sometimes skim the surface of the water in pursuit of their prey, which consists of insects. When they rest or pass the night, they generally seek holes, &c., in high buildings or trees. In such places the females also form their nests, of straw or similar materials; the interior is, however, cemented together with a glutinous substance, furnished by glands which are peculiar to the birds of this subfamily. The eggs are usually two in number.

* This division was originally proposed by Scopoli, under the previously used appellation of *Apus*, in 1777. Illiger employed the above name in 1811. Two other names have since been applied to this division, viz. *Micropus* and *Brachypus*, by Wolff and Meyer.

1. C. *Apus* (Linn.) Pl. enl. 542. f. 1. — Cypselus murarius *Temm.*, Gould's B. of Eur. pl. 53. f. 1.
2. C. *cafer* Licht. Cat. Dupl. Berl. Mus. No. 602. — Hirundo Apus var. β *Pall.*
3. C. *Melba* (Linn.) Cuv. Edwards's Birds, pl. 27., Gould's B. of Eur. pl. 53. f. 2. — Hirundo alpina *Scop.*; Cypselus alpinus *Temm.*; C. gutturalis *Vieill.* Le Vaill. Ois. d'Afr. t. 243.; H. gularis *Steph.*
4. C. *unicolor* Jard. & Selby, Ill. Orn. pl. 83.
5. C. *vittatus* Jard. & Selby, Ill. Orn. n. s. pl. 39.
6. C. *affinis* Gray, Ill. Ind. Zool. pl. 35. f. 2. — Cypselus nipalensis *Hodgs.*
7. C. *Pygargus* Temm. Pl. col. 460. f. 1.
8. C. *balasiensis* Gray, Griff. An. Kingd. ii. 60. — Cypselus palmarum *Gray*, Ill. Ind. Zool. pl. 35. f. 1.
9. C. *velox* (Vieill.) N. Dict. d'Hist. Nat. xiv. 533., Le Vaill. Ois. d'Afr. t. 243. f. 2.
10. C. *pacificus* (Lath.) Lamb. Icon. ined. 89. — Cypselus australis *Gould*, B. of Austr. pl.
11. C. *sinensis* (Gmel.) Cuv.
12. ? C. *parvus* Less. Tr. d'Orn. p. 268.
13. C. *andecolus* D'Orb. Voy. dans l'Amér. Mérid. Ois. t. 42. f. 2.
14. C. *cayanensis* (Gmel.) Temm. Pl. enl. 725. f. 2.
15. C. *nigra* (Gmel.) Briss. Orn. ii. t. 46. f. 3.
16. C. ———. Le Vaill. Ois. d'Afr. t. 244. f. 1. — Hirundo nigra *Vieill.*
17. C. ———. Pl. enl. 725. f. 1. — Hirundo cinerea var. β *Lath.*

Macropteryx *Swains.**

Bill short, small, and depressed, with the culmen curved at the tip; the nostrils basal, lateral, with the openings placed on the sides of the culmen, longitudinal, and large. *Wings* lengthened, with the first and second quills nearly equal and longest. *Tail* very long, and much forked. *Tarsi* shorter than the middle toe, thick, and naked. *Toes* long, slender, and compressed; armed with moderate, compressed, and curved claws.

These birds are inhabitants of India, the Eastern islands, and Africa. Their habits have been but little observed by naturalists, though we may suppose that they are very similar to those of the common swift. They must, however, possess a greater rapidity of flight, as their wings and tail are longer in proportion than those of any other genera of this subfamily. They frequent the jungles, and are often observed to perch on bare and leafless trees. The typical species is said to utter a loud parrot-like cry, while on the wing.

1. M. *Klecho* (Raffl.) — C. longipennis *Temm.* Pl. col. 83. f. 1., Swains. Zool. Illustr. n. s. pl. 74.
2. M. *comatus* (Temm.) Pl. col. 268.
3. M. *mystaceus* (Less.) Swains. Voy. de la Coqu. Zool. Ois. t. 22.
4. M. ? *ambrosiacus* (Linn.) Temm. Pl. col. 460. f. 2. — Cypselus parvus *Licht.*

Collocalia.†

Bill very small, depressed, with the culmen arched, and the sides gradually compressed to the tip; the nostrils basal, lateral, and placed in a membranous groove. *Wings* very long, with the second quill the longest. *Tail* moderate and even, or slightly emarginated. *Tarsi* naked, slender, and longer than the middle toe. *Toes* short, thick, and compressed, with the claws moderate and acute.

The birds of this division are inhabitants of the islands of the Indian Archipelago, where they are observed flying about in search of their food, in the manner of the common swift. They are, however, remarkable for the singularity of their nests, which are composed of some gelatinous substance, apparently secreted in their large salivary glands. These singular nests, which constitute an article in great request among the Chinese and Japanese epicures, are attached in

* Established by Mr. Swainson, under the name of *Macropterus*, which he afterwards changed to the above form in 1832: *Pallestre* of M. Lesson (1837) is coequal. M. Boie informed me, when he was in England, that he had given the name of *Dendrochelidon* to this division in 1828, but I have not yet succeeded in meeting with it in any work to which I have had access.

† Established by me in 1840 (*List of Genera, &c.* p. 8.).

numbers to the sides of caves, or in hollows of rocks; some are concealed in holes in the earth; and Mr. Cuming has kindly informed me that they are found inland, in the Philippine Islands, to the distance of fifty or sixty miles. The formation of the nest differs with the species. Some appear to be formed of flakes and threads cemented together, making an almost solid nest; others are composed entirely of threads of viscous matter. The exterior exhibits many nearly straight threads, which incline and are attached to each other; strengthened in front by some few short pieces of slender sticks. The interior, which is rather shallow, shows many layers of irregular network, formed of a multitude of threads, that cross and recross each other in every direction. These threads are of a yellowish semi-transparent white, and have been observed hanging from the bills of the birds while engaged in forming their nests. The female usually lays two eggs.

1. C. *esculenta* (Linn.) Briss. Orn. t. 46. f. 2. A.
2. C. *nidifica* Lath. Hist. of Birds, pl. 113.
3. C. *fuciphaga* (Thunb.) Act. Holm. xxxiii. 151. t. 4.
4. C. *Troglodytes* G. R. Gray.

Acanthylis *Boie.**

Bill small, depressed, with the culmen arched, and the sides gradually compressed to the tip; the nostrils basal, lateral, placed in a membranous groove, with the opening longitudinal and small. *Wings* lengthened and narrowed, with the first quill longest. *Tail* short, even, or slightly rounded, with the shaft of each feather more or less prolonged into acute points. *Tarsi* naked, thick, and shorter than the middle toe. *Toes* short, thick, and compressed; with the claws long, curved, and compressed.

These migratory birds are found in America, both North and South, India and its isles, and Australia. They live in flocks, feeding on insects taken during their flight, which is exceedingly swift, and is capable of being long sustained; and they vary their positions in the air with great facility, and with little apparent motion of the wings. When resting on the sides of rocks, trees, and chimneys, they support themselves by their sharp and strong claws, and at the same time are assisted by the thorny extremities of their tail-feathers. Their nests are usually placed in holes of trees, sometimes in rocks; that of the American species is composed, says Wilson, of very small twigs, fastened together with a strong adhesive glue or gum, which is secreted by two glands, one on each side of the hind head, and mixes with the saliva. With this glue, which becomes as hard as the twigs themselves, the whole is thickly besmeared. The nest itself is small and shallow, attached by one side or edge to the wall, and is totally destitute of soft lining. The eggs are generally four in number.

1. A. *pelasgia* (Linn.) Boie, Wils. American Ornithology, pl. 39. f. 1.
2. A. *acuta* (Gmel.) Pl. enl. 544. f. 1. — Hirundo martinica *Briss.* Orn. t. 45. f. 2.
3. A. *caudacuta* (Lath.) Gould, Lamb. Icon. ined. ii. 88., Birds of Austr. pl. — Chætura australis et Hirundo fusca *Steph.*; Chætura macroptera *Swains.* Ill. Orn. n. s. pl. 42.
4. A. *nudipes* (Hodgs.) Deless. Souv. d'un Voy. dans l'Inde, t. 9. — Cypselus leuconotus *Deless.* Mag. de Zool. 1840. t. 20.
5. A. *gigantea* (V. Hass.) Pl. col. 364.
6. A. *collaris* (Pr. Max.) Pl. col. 195. — Hirundo albicollis *Vieill.* Gallerie des Ois. t. 120.; H. zonatis *Shaw*, Cim. Phys. pl. 55.?
7. A. *brunnitorques* Lafr. Rev. Zool. 1844. 81.
8. A. *Sabini* Gray, Griff. An. Kingd. ii. 70. — Chætura bicolor *Gray*, Zool. Misc. p. 7.
9. A. *oxyura* (Vieill.) N. Dict. d'Hist. Nat. xiv. 473.
10. A. ? *senex* (Temm.) Pl. col. 397.
11. A. ? *montivagus* (D'Orb. & Lafr.) Voy. dans l'Amér. Mér. Ois. t. 42. f. 1.
12. A. *spinicauda* (Temm.) Pl. enl. 726. f. 2.
13. A. *Ciris* (Pall.) Zoogr. 1. 541.

* This division was first formed under the name of *Chætura*, by Mr. Stephens, in 1825; but, that word having been previously employed, it becomes necessary to adopt M. Boie's name proposed in 1826. *Hirund-apus* of Mr. Hodgson (1836), *Hemiprocne* of Nitzsch, and *Pullene* of M. Lesson (1837) are synonymous.

February, 1845.

COLMSON TESTIMONY

C. Baffin and Co's Patent Lithotint.

HIRUNDO
nigrita. G.R. Gray.

CYPSELINÆ.

HIRUNDININÆ.

C. Hullmandel & Pater Lithogr.

1 MACROPTERYX klecho 2 CYPSELUS apus 3 COLLOCALIA esculenta 4 ACANTHYLIS pelasgia
5 ATTICORA fasciata 6 COTYLE rupestris 7 HIRUNDO rustica 8 PROGNE purpurea 9 CHELIDON urbica

The second Subfamily,

HIRUNDININÆ, or SWALLOWS,

have the Bill short, more or less depressed, with the gape very wide, and the sides gradually compressed towards the tip; the Nostrils basal, lateral, and rounded; the Wings lengthened, with the first quill the longest; the Tail more or less forked; the Tarsi short, generally naked and scutellated; the Toes usually long and slender; and the Claws moderate and slightly curved.

HIRUNDO *Linn.**

Bill short, much depressed, with the gape very wide, and the sides gradually compressed towards the tip; the nostrils basal, small, oblong, and partly covered by a membrane. *Wings* lengthened, with the first quill longest. *Tail* more or less forked, the outer feather of each side sometimes lengthened much beyond the others. *Tarsi* shorter than the middle toe and scutellated. *Toes* long, slender, with the lateral ones unequal; the claws moderate, curved, and acute.

The series of birds which belong to this genus are inhabitants of most parts of the Old and New Worlds, migrating to different regions in search of their insect food. When about to remove to a country of more genial temperature, where they can find a better supply of food, they collect in immense flocks, and may be observed thus congregating upon the roofs of houses, and other high buildings, or trees, before their final departure. At other times they seem to prefer, in small flocks, the neighbourhood of lakes, rivers, and ponds, over which they fly rapidly near the surface with extensive sweeps, suddenly changing their course backwards and forwards, for a long time together; being all the time busily engaged in catching their food, which consists usually of insects, although some of the species are stated to feed occasionally on myrtle berries. They do not entirely confine themselves to the neighbourhood of water, but are sometimes seen in the streets of cities, plains, fields, and gardens, and are often noticed sitting in numbers on the tops of buildings, and on the branches of trees, resting from the fatigue of their usual occupations. Such is their dexterity of flight, that they possess the power of drinking and washing themselves while on the wing. Their nests are mostly composed of clay or mud mixed with straw, variously formed, but generally attached to a building either externally or in holes. Other species form their nests in holes in the ground, in which case they are constructed entirely of loose dry grass, lined with feathers. The eggs are usually five or six in number.

1. H. *rustica* Linn. Pl. enl. 543. f. 1. — Hirundo domestica *Pall.*, Gould B. of Eur. pl. 54.

2. ? H. *cahirica* Licht. Cat. Dupl. Berl. Mus. 596. — Hirundo Savignii *Leach*; H. Riocouri *Savig.* Hist. de l'Egypt, Ois. t. 4. f. 4.; H. Boissoneanii *Temm.*; H. rustica orientalis *Schl.*

3. H. *rutila* Vieill. N. Dict. d'Hist. Nat. xiv. 530.

4. H. *javanica* Sparr. Mus. Cars. iv. t. 100., Pl. col. 83. f. 2. — H. jewan *Sykes*, Meyen, Nova Acta, 1834. t. 10. Suppl.

5. H. *pacifica* Lath. Griff. An. Kingd. ii. pl. p. 95. — Hirundo javanica *Vig. & Horsf.*; H. neoxena *Gould*, B. of Austr. pl.

6. H. *rufa* Vieill. Ois. Amer. Sept. 1. t. 60. — H. americana *Wils.* Amer. Orn. pl. 38. f. 1, 2., Audub. B. of Amer. pl. 178.

7. H. *erythrogaster* Bodd. Pl. enl. 724. f. 1. — Hirundo rufa *Gmel.*

8. H. *americana* Gmel.

9. H. *frontalis* Quoy & Gaim., Voy. de l'Astrol. Ois. t. 12. f. 1.

10. H. *rufifrons* Vieill. Ency. Méth. p. 524., Le Vaill. Ois. d'Afr. t. 245. f. 1.

11. H. *daurica* Linn. — Hirundo alpestris *Pall.* Zoogr. t. 30. f. 2.; H. erythropygia *Sykes*; H. nipalensis *Hodgs.*

* Established by Linnæus in 1735 (*Systema Naturæ*). It embraces *Cecropis* of M. Boie (1826), and *Herse* of M. Lesson (1837).

12. H. *cucullata* Bodd. Pl. enl. 723. f. 2. — Hirundo capensis *Gmel.* Le Vaill. Ois. d'Afr. t. 245. f. 1.
13. H. *rufula* Temm. Man. d'Orn. pt. iii. p. 298.
14. H. *striolata* Temm. Schlegel, Rev. Crit. Ois. d'Eur. p. 42.
15. H. *senegalensis* Linn. Pl. enl. 310., Swains. B. of W. Afr. 11. pl. 6.
16. H. *nigricans* Vieill. N. Dict. d'Hist. Nat. xiv. 523., Voy. de l'Astrol. Ois. t. 12. f. 2. — Hirundo pyrrhonotus *Vig. & Horsf.*; Collocalia arborea *Gould,* B. of Austr. pl.
17. H. *Ariel* (Gould), Birds of Austr. pl.
18. H. *borbonica* Gmel.
19. H. *virescens* Vieill. Ency. Méth. p. 520., Pl. enl. 544. f. 2. — Hirundo borbonica var. β *Lath.*
20. H. *tahitica* Gmel. Lath. Gen. Syn. pl. in titlepage.—Hirundo pyrrholæma *Forst.* Desc. Anim. p. 241., Icon. ined. 167.; H. taitensis *Less.*
21. H. *fulva* Vieill. Ois. d'Amér. Sept. 1. t. 32. — Hirundo lunifrons *Say,* Pr. Bonap. Amer. Orn. pl. 7. f. 1., Audub. B. of Amer. pl. 68.
22. H. *melanogaster* Swains. Phil. Mag. 1827. p. 366.
23. H. *filifera* Steph. Gen. Zool. xiii. 79. — Hirundo ruficeps *Licht.*: H. filicauda *Frankl.*; H. indica *Gmel.* ? Lath. Gen. Syn. pl. 56.; H. erythrocephala *Gmel.* ?
24. H. *leucorrhoa* Vieill. Ency. Méth. p. 523., Azara No. 304. — Hirundo leucopyga *Licht.* Meyen, Nova Acta, 1834. p. 73. Suppl. 10.
25. H. *cyanoleuca* Vieill. Ency. Méth. p. 521. — Hirundo melampyga *Licht.* Azara No. 303.
26. H. *bicolor* Vieill. Ois. d'Amér. Sept. 1. t. 31. — Hirundo viridis *Wils.* Amer. Orn. pl. 38. f. 3., Audub. B. of Amer. pl. 98.
27. H. *thalassina* Swains. Phil. Mag. 1827. p. 366., Audub. B. of Amer. pl. 385. f. 5.
28. H. *albiventer* Bodd. Pl. enl. 246. f. 2. — Hirundo leucoptera *Gmel.*
29. H. *maculata* Bodd. Pl. enl. 546. f. 1. — Hirundo leucoptera var. β *Lath.*; H. maculosa *Kuhl.*
30 H. *gutturalis* Scop. Sonn. Voy. t. 18. — Hirundo panayana *Gmel.*
31. H. *cristata* Steph. Gen. Zool. x. 94., Le Vaill. Ois. d'Afr. t. 247.
32. H. *peruviana* Lath.
33. H. *cinerea* Gmel. — Hirundo peruviana *Briss.* Forst. Desc. Anim. p. 240., Icon. ined. 168.
34. H. *melanoleucus* Pr. Max. Beitr. 1. 303., Planch. color. 209. f. 2.
35. H. *Tapera* Linn. Briss. Ornith. ii. t. 45. f. 3.
36. H. *cyanopyrrha* Vieill. Ency. Méth. p. 528.
37. H. *pyrrhonota* Vieill. Ency. Méth. p. 524., Azara No. 305.
38. H. *pascuum* Pr. Max. Beitr. iii. p. 360.
39. H. *minuta* Pr. Max. Beitr. ii. 336., Pl. col. 209. f. 1.
40. ? H. *nigra* Gmel. Briss. Orn. ii. t. 46. f. 3.
41. H. *fucata* Temm. Pl. col.
42. H. *leucosoma* Swains. B. of W. Afr. ii. p. 74.
43. H. *concolor* Sykes, Proc. Z. S. 1831. 83.
44. H. *brevicaudata* M'Clel. & Horsf. Proc. Zool. Soc. 1839. 156.
45. H. *Smithii* Leach, Tuckey's Voy. Congo, p. 407.
46. H. *unalaschkensis* Gmel.
47. H. *abyssinica* Guer. Rev. Zool. 1843. 322.
48. H. *nigrita* G. R. Gray.

Atticora *Boie.**

Bill short, weak, with the gape very wide, the sides gradually compressed, and the culmen curved to the tip; the nostrils basal, lateral, and rounded. *Wings* lengthened, with the first quill the longest. *Tail* very long, and much forked. *Tarsi* shorter than the middle toe, and scutellated. *Toes* long and very slender, and the lateral ones unequal.

The species of this division inhabit South America, New Guinea, Australia, and Africa. The Australian bird, as Mr. Coxen informs Mr. Gould, "is a very wandering species, never very numerous, and is generally seen in small flocks of from ten to twenty in number, flying about, sometimes in company with the other swallows, for about ten minutes, and then flying right away; Mr. Coxen noticed this singular habit every time he had an opportunity of observing the species. It usually flies very high, a circumstance which renders it difficult to procure specimens. Its flight more nearly resembles that of the swift than that of the swallow; its cry also, at times, very much resembles that of the former. Its food principally consists of minute black flies. This bird chooses for its nest the deserted hole of either the Walyte or the Boodea, in the sides of which it burrows for about seven or nine inches in a horizontal direction, making no nest, but merely laying its eggs on the bare sand."

1. A. *fasciata* (Gmel.) Pl. enl. 724. f. 2., Swains. Zool. Illustr. n. s. pl.
2. A. *leucosternon* Gould, B. of Austr. pl.
3. A. *pristoptera* (Rüpp.) Faun. Abyss. t. 39. f. 2.
4. A. ? *vanikorensis* (Quoy & Gaim.) Voy. de l'Astrol. Ois. t. 12. f. 3.

* Inserted from the verbal communication of M. Boie; but the date of publication, and the place where published, are at present unknown to me.

Progne *Boie.**

Bill strong, short, the gape very wide, the sides gradually compressed, the culmen and lateral margins arched to the tip, the latter inflected; the nostrils basal, large, and rounded. *Wings* lengthened, with the first quill the longest. *Tail* moderate, and slightly forked. *Tarsi* shorter than the middle toe, strong, and scutellated. *Toes* long, strong, the lateral ones equal; the claws moderate and curved.

The New World is the peculiar abode of these birds, which migrate from one part to another according to the season, extending their migrations to within the arctic circle. Their flight, says Wilson, unites in it all the swiftness, ease, rapidity of turning, and gracefulness of motion of their tribe. They exhibit great boldness in attacking other birds, viz., crows, hawks, and eagles, by means of diving, and sweeping upon and around them, whenever they make their appearance, and with such vigour and rapidity, as to put them instantly to flight. Their prey consists of wasps, bees, and large beetles, &c. The people of the United States of America frequently fit up retreats for these birds against their houses, or on trees, in which they make their nests, which are formed of dry leaves of weeping willow, slender straws, hay, and feathers, in considerable quantity. The eggs are four in number.

1. P. *purpurea* (Linn.) Pl. enl. 722., Wils. Amer. Orn. pl. 39. f. 1, 2. — Hirundo violacea *Gmel.*; H. subis *Linn.*; H. cærulea *Vieill.* Ois. d'Amér. Sept. t. 26, 27.; H. versicolor *Vieill.* Audub. B. of Amer. pl. 22.

2. P. *modestus* Gould, Voy. of the Beagle, Zool. Birds, pl. 5. — Hirundo concolor *Gould*, Proc. Z. S. 1837. p. 22.

3. P. *dominicensis* (Gmel.) Pl. enl. 545. f. 1., Vieill. Ois. d'Amér. Septr. t. 28, 29. — Hirundo albiventris *Vieill.*

4. P. *chalybea* (Gmel.) Pl. enl. 545. f. 2. — Hirundo cayanensis *Briss.* Orn. ii. t. 46. f. 1.

5. P. *domestica* (Vieil.) N. Dict. d'H. Nat. xiv., Azara No. 300.

6. P. *fusca* Vieill. N. Dict. d'Hist. Nat., Azara No. 301.

Cotyle *Boie.*†

Bill moderate, very flat, extremely broad at its base, and gradually narrowed towards the tip; the nostrils very prominent and rounded. *Wings* very long, with the first quill the longest. *Tail* moderate, and emarginated, or nearly straight at the end. *Tarsi* rather shorter than the middle toe, slender, and scutellated. *Toes* rather short, very slender, the lateral ones unequal; the claws moderate and slightly curved.

The birds of this division are found both in the Old and New Worlds, making periodical visits to different parts, according to the season, and extending them even to the sixty-eighth degree of latitude. They usually frequent the banks of rivers, sometimes in large flocks; and are often observed skimming the surface of the water, and preying on gnats and other small insects. If the weather should become cold after their arrival, they take refuge in their holes, clustering together for warmth. The nest are lodged in holes, which are commonly scratched out of the high sandy banks of rivers, or gravel pits, at a short distance from the surface, running in a horizontal direction to a depth varying from two to seven or eight feet. At the end of each hole is placed a little fine dry grass, with a few large downy feathers, on which are deposited five eggs.

* This genus was established by M. Boie (*Isis*) in 1826.

† Established by M. Boie (*Isis*) in 1822. In 1837, M. Lesson proposed the genus *Biblis*, which is coequal.

1. C. *riparia* (Linn.) Pl. enl. 543. f. 2., Gould B. of Eur. p. 58., Wils. Amer. Orn. pl. 38. f. 4., Audub. B. of Amer. pl. 385. f. 1, 2, 3.

2. C. *palustris* (Steph.) Gen. Zool. x. 101., Le Vaill. Ois. d'Afr. t. 246. f. 2. — Hirundo paludicola *Vieill.*

3. C. *rupestris* (Scop.) Stor. deg. Uce. t. 409. f. 2. — Hirundo montana *Gmel.*? Gould B. of Eur. pl. 56.

4. C. *Fuligula* (Licht.) Forst. Desc. Anim. p. 55., Le Vaill. Ois. d'Afr. t. 246. f. 1. — Hirundo rupestris juv. *Temm.*

5. C. *cincta* (Bodd,) Pl. enl. 723. f. 1. — Hirundo torquata *Gmel.*

6. C. *jugularis* (Pr. Max.) Beitr. i. 345., Pl. col. 161. f. 2. — Hirundo flavigastra *Vieill.*; H. hortensis *Licht.* Azara No. 306.

7. C. ? *ruficollis* (Vieill.) N. Dict. d'Hist. Nat. xiv. 523.

Chelidon *Boie.**

Bill short, strong, broad at the gape, gradually compressed on the sides; the culmen elevated at the base, and slightly curved to the tip; the nostrils basal, lateral, and rounded. *Wings* long, with the first quill the longest. *Tail* moderate and forked. *Tarsi* longer than the middle toe, and clothed with plumes. *Toes* long, clothed with plumes, the lateral ones unequal; the claws moderate and curved.

The species which forms this division is peculiar to the Old World, and is, like the others of this subfamily, of migratory habits. They are found in the neighbourhood of rivers, or in warm and low moist situations, which best afford them a ready supply of their insect food. Their flight is not rapid, but is more sweeping and buoyant than that of others. When about to migrate they collect in large flocks, which frequently cover for several days the roofs of high buildings. The nest is usually attached to a building or the face of a rock, and is composed of mud, closed on all sides, and leaving only a small orifice for the passage of the bird; the interior is lined with straw, hay, and feathers. The eggs are usually five or six in number. †

C. *urbica* (Linn.) Boie, Pl. enl. 542. f. 2., Gould's B. of Eur. pl. 57. — Hirundo lagopoda *Pall.*

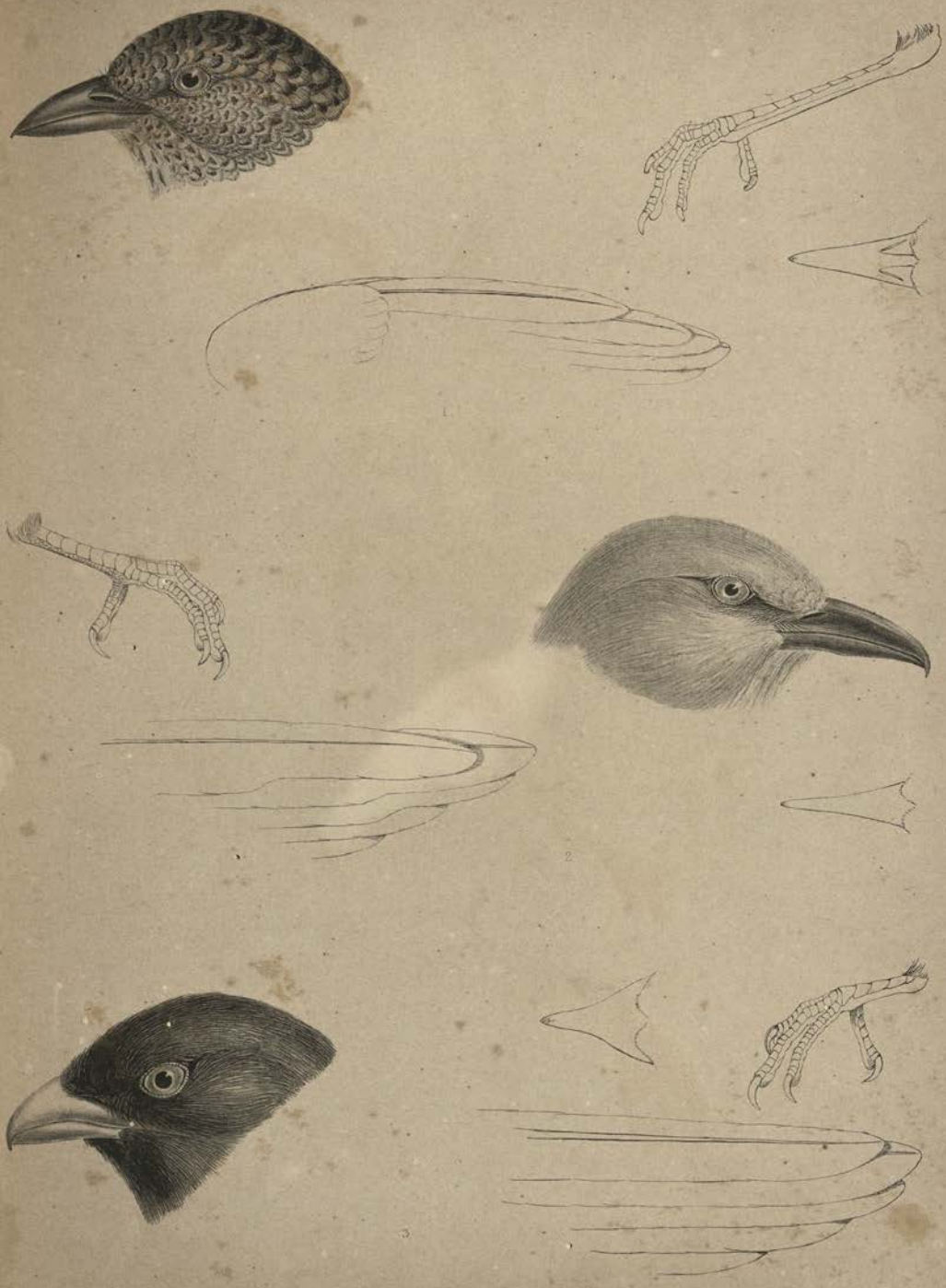
* It was in the *Isis* for the year 1822 that M. Boie established this genus.

March, 1845.

C. Hollandale's Patent Lithotint.

CORACIAS
affinis. Horsf.

CORACIANÆ.



1. BRACHYPTERACIAS leptosomus. 2. CORACIAS garrula. 3. EURYSTOMUS orientalis.

The third Family,

CORACIADÆ, or ROLLERS,

have the Bill more or less lengthened, and broad at the base, with the sides compressed towards the tip, which is hooked; the Nostrils basal, lateral, with the opening linear or oval; the Wings long and pointed; the Tail generally short and even; the Tarsi short; the Toes moderate, sometimes free, or the outer toe united at the base with the middle one.

The first Subfamily,

CORACIANÆ, or ROLLERS,

have the Bill moderate, higher than broad at the base, the sides much compressed towards the tip, which overhangs the lower mandible; the nostrils basal, lateral, linear, and oblique; the Wings moderate; the Tail moderate, and the side feathers sometimes lengthened; the Tarsi short; the Toes moderate, and free at the base.

BRACHYPTERACIAS *Lafr.**

Bill long, broad, and rather depressed at the base, the culmen gradually curved to the tip, with the sides compressed; the nostrils basal, linear, and oblique. *Wings* short, reaching to the base of the tail, with the two first quills much graduated, and the four next nearly equal and longest. *Tail* lengthened and rounded. *Tarsi* lengthened, slender, and covered in front with transverse scales. *Toes* moderate, the outer toe longer than the inner, and the hind toe very short; all armed with short curved claws.

They are found in Madagascar, but their habits and manners are unknown.

1. B. *leptosomus* (Less.) Less. Ill. Zool. t. 22., Mag de Zool. 1834. Ois. t. 31.

2. B. *pittoïdes* Lafr. Mag. de Zool. 1834. Ois. t. 32.

CORACIAS *Linn.*†

Bill long, straight, more elevated at the base than broad, the sides much compressed, and the tip bent over that of the lower mandible; the nostrils basal, linear, oblique, and partly covered by a feathered membrane. *Wings* moderate and pointed, with the second and third quills the longest. *Tail* long and

* The Baron de Lafresnaye established this genus in 1834 (*Magazin de Zoologie*, 1834). *Chloropygia* of Mr. Swainson (1837) is coequal.

† It was in 1735 that Linnæus first published this division under the above name, which in 1760 Brisson changed to *Galgulus*.

rounded, with the lateral feathers sometimes lengthened. *Tarsi* much shorter than the middle toe. *Toes* moderate, free at the base, with the outer toe nearly as long as the middle one; the hind toe long; the claws moderate, curved, and acute.

These birds are found in Africa, India, New Guinea, and Australia, and, owing to their migratory habits, are sometimes obtained in various parts of Europe, and even in England. Their food, which consists chiefly of insects and fruits, causes them to move about from place to place; and they are generally observed in wooded districts, solitary or in pairs, perched upon one of the top branches, usually selecting a dead one, and occasionally taking flight to a short distance to seize an insect on the wing, and then returning again to the same spot or one very near it. The nest is placed in holes of decayed trees; the female lays from four to seven eggs.

1. C. *garrula* Linn. Pl. enl. 486., Le Vaill. Ois. de Parad. t. 32. 33.
2. C. *caudata* Linn. Pl. enl. 88. — Coracias senegalensis *Gmel.* Edwards's Birds, pl. 327.; C. senegala *Lath.*; C. abyssinica *Gmel.* Pl. enl. 626.; C. albifrons *Shaw*, Le Vaill. Ois. de Parad. t. 25.; C. abyssinus *Bodd.*
3. C. *indica* Linn. Edwards's Birds, pl. 326. — Coracias bengalensis *Linn.* Pl. enl. 285.; C. nævia *Daud.*; C. pilosa *Lath.*; C. crinita *Shaw*, Le Vaill. Ois. de Parad. t. 27, 28, 29.
4. C. *viridis* Cuv. Le Vaill. Ois. de Parad. t. 31. — C. vivida *Lath.?*
5. C. *Temminckii* (Vieill.) Wagl. Le Vaill. Ois. de Parad. t. 6. — Coracias papuensis *Quoy et Gaim.* Voy. de l'Astrol. Ois. t. 16.
6. C. *cyanogaster* Cuv. Le Vaill. Ois. de Parad. t. 26., Jard. & Selby's Ill. Orn. pl. 123., Swains. Birds of W. Afr. ii. pl. 13.
7. C. *nuchalis* Swains. Birds of W. Afr. ii. p. 110.
8. C. *affinis* M'Clell. Proc. Z. S. 1839. 164.

Eurystomus *Vieill.**

Bill short, strong, depressed and broad at the base, the sides much compressed towards the tip, which is hooked; the nostrils basal, lateral, oblique, and partly covered by a plumed membrane. *Wings* long and pointed, with the second quill the longest. *Tail* moderate and even. *Tarsi* much shorter than the middle toe, and covered with transverse scales. *Toes* long, united at the base, with the lateral toes unequal, the outer the longest, and the hind toe long; the claws moderate, curved, and acute.

The warmer parts of the Old World and Australia are inhabited by the birds that compose this genus. They are usually seen perched on the top of some high tree or decayed branch, whence they dart more easily upon their prey, which consists principally of insects and fruits. They are very noisy birds while on the wing, and even when perched. Their flight is like that of the swallow, and is mostly performed during the evening.

1. E. *orientalis* (Linn.) Pl. enl. 619., Le Vaill. Ois. de Parad. t. 36. — Eurystomus fuscicollis et E. cyanicollis *Vieill.*
2. E. *madagascariensis* (Gmel.) Pl. enl. 501., Le Vaill. Ois. de Parad. t. 34. — Eurystomus violaceus *Vieill.*
3. E. *afra* (Lath.) Le Vaill. Ois. de Parad. t. 35. — Eurystomus purpurascens et E. rubescens *Vieill.*
4. E. *glaris* (Vieill.) Le Vaill. Ois. de Parad. t. 56.
5. E. *viridis* (Wagl.) Syst. Avium, sp. 5.
6. E. *pacificus* (Lath.) Lamb. Icon. ined. ii. 83. — Eurystomus australis *Swains.* Gould's B. of Austr. pl.; E. orientalis *Vig. et Horsf.*
7. E. *collaris* Vigors, Zool. Journ. v. p. 273.

* This genus was established in 1816 by Vieillot (*Analyse*, p. 37.), and in 1817 Cuvier published *Colaris*, which is coequal.

June, 1845.

Hullmandel & Walton Lithographers.

TODUS
subulatus. Gould.

The second Subfamily,

TODINÆ, or TODIES,

have the Bill lengthened, much depressed, and slightly compressed towards the tip, which is rounded or pointed: the gonys long, slightly ascending, and rounded beneath; the Nostrils lateral, with the opening anterior and exposed: the Wings short and rounded; the Tail moderate, and rather emarginated: the Tarsi moderate and slender: the Toes unequal; the outer toe longer than the inner, and both more or less united at the base; the hind toe short: the Claws small.

TODUS *Linn.**

Bill longer than the head, broad at the base, and much depressed throughout its length, with the culmen slightly curved, and the sides gradually compressed to the tip, which is rounded or rather pointed; the lateral margins straight, and finely serrated; the gonys lengthened and straight; the gape furnished with short bristles; the nostrils lateral, and placed in a broad and rather short groove, with the opening large, rounded, and placed anteriorly in the groove. *Wings* short and rounded: with the fourth, fifth, and sixth quills equal and longest. *Tail* moderate, broad, and slightly emarginated. *Tarsi* as long as the middle toe, slender, and covered with an entire scale in front. *Toes* unequal and slender; the middle toe long; the outer toe longer than the inner, and united as far as the second joint; the inner united as far as the first joint; the hind toe rather short; the claws short, compressed, and curved.

The species are found in the tropical parts of America, and the various islands of the West Indies. They are usually seen singly, in lone parts and moist places, sitting in a crouched manner on the branches, with the head drawn in between the shoulders, and are so dull and stupid that they are easily approached sufficiently near to be caught with the hand. When they spy an orthopterous or other insect approaching, they instantly secure and feed on it. The nest is said to be formed in a hole of the ground, and made of dry grass and moss, lined with feathers and other soft materials. Prince Neuwied states that these birds form a conical bag-shaped nest, composed of wool, with a narrow entrance on the side. The eggs are three or four in number.

1. T. *viridis* Linn. Pl. enl. 585. f. 1. 2., Swains. Zool. Ill. n. 5. pl. 96., Vieill. Ois. d'Amér. Sept. t. 56.
2. T. *mexicanus* Less. Ann. Sci. Nat. 1838. p. 167.—Todus viridis *Dict. Sci. Nat.* t. 32. f. 1.
3. T. *portoricensis* Less. Ann. Sci. Nat. 1838. p. 167.—Todus viridis *Vigors*, Zool. Journ. ii. 426.; T. multicolor *Gould*, Icon. Av, pl., Voy. l'Isle de Cuba, Ois. t. 22.
4. T. *subulatus* Gould.

* Established by Brisson in 1760, and adopted by Linnæus in 1766.

Hullmandel & Walton lithographers.

ALCOLMSON TESTIMONY

EURYLAIMUS
rubropygius Hodg.

The third Subfamily,

EURYLAIMINÆ, or BOATBILLS,

have the Bill large, more or less depressed, and extremely broad at the base, with the culmen curved, and the sides gradually compressed to the tip, which is slightly emarginated; the gonys long and ascending; the Nostrils lateral, more or less near to the base, and exposed; the Wings moderate, with the third and fourth quills equal and longest; the Tail generally moderate, graduated or forked; the Tarsi short; and the Toes long, with the lateral ones unequal, and the outer toe united to the middle one for some distance.

EURYLAIMUS *Horsf.**

Bill large, rather depressed, and extremely broad at the base, with the culmen arched, and the sides gradually compressed to the tip, which is emarginated; the lateral margins curved, and dilated at the base; the gonys long and ascending; the nostrils lateral and basal, with the opening pierced in the substance of the bill, more or less rounded, and partly protected by the frontal plumes. *Wings* moderate, with the third and fourth quills equal and longest. *Tail* more or less long, and rounded. *Tarsi* shorter than the middle toe, strong, feathered below the knee, and covered in front with transverse broad scales. *Toes* long, with the outer toe longer than the inner, and united to a great extent to the middle toe; the hind toe long; and all the claws long, curved, and acute.

The species of this genus are found in India and its archipelago. They reside in small flocks in the humid forests and jungles, especially those that abound with rivers and marshes. Their food consists of insects and worms, and at times they feed also on berries and fruits.

1. E. *javanicus* Horsf. Linn. Trans. xiii. p. 170., Zool. Res. pl. — Eurylaimus Horsfieldii *Temm.* Pl. Col. 130, 131., Gal. des Ois. t. 125., Swains. Nat. Libr. Flyc. x. pl. 30.

2. E. *ochromalus* Raffl. Linn. Trans. xiii. p. 297. — Eurylaimus cucullatus *Temm.* Pl. col. 261.; E. Rafflesii *Less.*

3. E. *lunatus* Gould, Zool. Trans. i. pl. 25.—Type of Serilophus *Swains.* (1837).

4. E. *rubropygius* Hodgs. App. to the List of Mr. Hodgson's Collection.

5. E. *Dalhousiæ* Jam. New. Phil. Journ. xviii. p. 261., Gould, Icones Av. pl. — Eurylaimus psittacinus *Müll.*; Raya sericeogula *Hodgs.* Pl. col. 598., Wils. Zool. Illustr. pl. 7.; Type of Psarisomus *Swains.* (1837).

6. E. *sumatranus* (Raffl.) Linn. Trans. xiii. p. 303. — Eurylaimus corydon *Temm.* Pl. col. 297.; Corydon Temminckii *Less.*; Type of Corydon *Less.* (1828).

* Established by Dr. Horsfield in 1820 (*Linn. Trans.* xiii. p. 170.). *Platyrhynchus* of Vieillot (1825) is synonymous. It embraces *Corydon* of M. Lesson (1828), *Serilophus* and *Psarisomus* (1857) of Mr. Swainson. This latter name is synonymous with *Crossodera* of Mr. Gould, and *Raya* of Mr. Hodgson (1839). The last-mentioned author altered his name to *Simus* in 1841.

Cymbirhynchus *Vigors.*

Bill large, and extremely broad at the base, with the culmen rather elevated and arched to the tip, which is emarginated, the sides gradually compressed, and the gonys long and ascending; the gape furnished with rather long strong bristles; the nostrils lateral, pierced near the middle in the substance of the bill, and exposed. The other characters like those of the former genus.

The typical species that constitutes this genus is found in India and its isles. It prefers the most retired and shady places of the jungles, where it is mostly observed perched on the lower branches of the trees, remaining in one spot for a considerable period if not disturbed. Its food consists of various-sized coleopterous insects, which it probably captures on the wing. The nest is stated to be pendent from the branch of a tree or bush that overhangs the water.

C. *macrorhynchus* (Gmel.) — Todus nasutus *Lath.* Gen. Syn. pl. 30.; Eurylaimus nasutus *Temm.* Pl. col. 154.; E. lemniscatus *Raffl.*; Erolla nasica *Less.*; Platyrhynchus ornatus *Desm.*

Peltops *Wagl.*†

Bill rather long, slightly depressed, and moderately broad at the base, with the culmen curved, and the sides gradually compressed to the tip, which is emarginated; the lateral margins slightly dilated at the base, and then curved towards the tip; the gonys short and ascending; the gape furnished with moderately long and strong bristles; the nostrils lateral, pierced in the substance of the bill at a short distance from the base, with the opening rounded and exposed. *Wings* long and pointed, with the third and fourth quills equal and longest. *Tail* moderate and forked. *Tarsi* much shorter than the middle toe, and covered with transverse scales in front. *Toes* rather long; the outer longer than the inner, and much united at its base to the middle toe; the hind toe rather short, and armed with a short curved claw.

It is in the humid forests of New Guinea that the type of this genus is found.

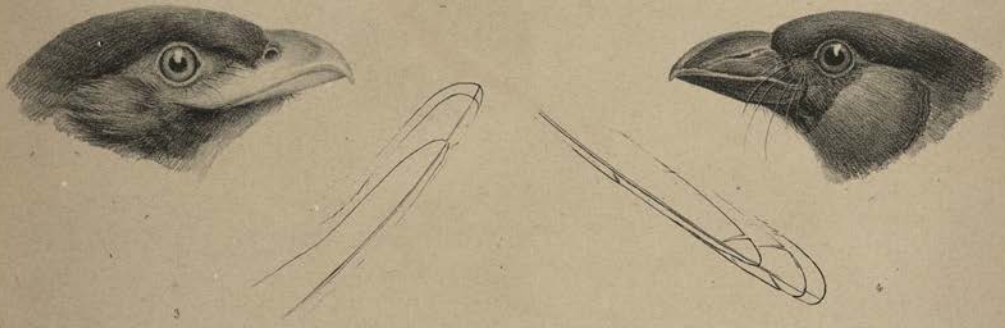
P. *Blainvillei* (Garn.) Wagl. Voy. de la Coqu. Ois. t. 19. f. 2., Swains. Nat. Libr. Flyc. pl. 31.

* The late Mr. Vigors established this name in 1831. (*Mem. of Sir S. Raffles*, App. p. 654.)
† Wagler established this genus in the *Isis* for 1829. *Erolla* of M. Lesson (1831) and *Platystomus* of Mr. Swainson (1837) are synonymous.

January, 1847.

Executed in Hullmandel & Walton's own Process.

MOMOTUS
momotula (Licht.)



MOMOTINÆ.

Wolf del et lith. Printed by Hullmandel & Walton

1. TODUS portoricensis. 2. PELTOPS Blainvillei. 3. EURYLAIMUS sumatranus 4. CYMBIRHYNCHUS macrórhynchus 5. MOMOTUS ruficapillus

The fourth Subfamily,

MOMOTINÆ, or MOTMOTS,

have the Bill rather long, more or less elevated and broad at the base, the sides compressed, and the lateral margins more or less strongly serrated: the Wings rather short, and rounded: the Tail lengthened, graduated, and the two middle feathers usually longer than the others: the Tarsi short, and scutellated: the Toes unequal; the outer toe longer than the inner one, and united at the base as far as the second joint of the middle toe; the hind toe rather short and weak.

MOMOTUS *Briss.**

Bill rather long, straight, more or less elevated and broad at the base, with the sides compressed to the tip, which is slightly hooked and obtuse; the lateral margins more or less strongly serrated; the gonys long and slightly ascending; the nostrils basal and lateral, with the opening small and rounded. *Wings* moderate and rounded; with the fourth, fifth, and sixth quills nearly equal and longest. *Tail* lengthened and graduated, with the two middle feathers usually longer than the others. *Tarsi* as long as the middle toe, and covered in front with narrow transverse scales. *Toes* unequal; the outer toe nearly as long as the middle one, and united at the base as far as the second joint; the inner toe short, and slightly united; the hind toe rather short and weak; the claws moderate, much compressed and curved.

The species of this genus are peculiar to the tropical parts of America and to some of the West Indian Islands. They seem to prefer the deep shades of the forests, or the dark recesses of ancient buildings. They usually perch solitary on a branch, or on some projection of a building, with the head drawn into the shoulders, with a solemn still expression, uttering at the same time a melancholy croak. Early in the morning and in the dusk of the evening they appear more lively, watching for any passing insect, which may approach sufficiently near for them to dart after in a short flight. They likewise feed on fruits, lizards, and snakes; these are taken by the point of the bill, and, with a toss of the head, as it were, pitched into the throat and swallowed. The eggs of birds also form a portion of their food. The nest of one species is stated by Sir W. Jardine to be formed in a bank of marl, with an entrance of two inches and a half in width, and running five feet in a direct line and then five feet more in a direct angle into the ground, with the end enlarged; and in this enlargement were found three young, huddled up on the top of a moving mountain of maggots, and claws and remains of beetles and various other insects.

* Established by Brisson in 1760. *Merula* of Mœhring? (1752), *Prionites* of Illiger (1811), and *Baryphonus* of Vieillot (1816) are synonymous. It embraces *Crypticus* of Mr. Swainson (1827), with which *Hylomanes* of Prof. Lichtenstein (1838) is coequal.

1. M. *brasiliensis* Lath. Pl. enl. 370. — Rhamphastos momota *Linn.*; Baryphonus cyanocephalus *Vieill.*, Levaill. Hist. Nat. Prom. t. 37, 38.

2. M. *bahamensis* Swains. Two Cent. and a Quart. p. 332., Jard. & Selby, Ill. Orn. n. s. pl. 45.

3. M. *cæruliceps* Gould, Proc. Z. S. 1836. p. 18 . — Prionites cæruleocephalus *Jard. & Selby*, Ill. Orn. n. s. pl. 45.

4. M. *ruficapillus* (Ill.) Levaill. Hist. Nat. Roll. t. 39. — Momotus rubricapillus *Steph.*; Prionites Dombeyanus *Ranz.*; M. cyanogaster *Vieill.*, Azara, No. 52.; M. Dombeyi *Less.*

5. M. *Levaillantii* Less. Man. d'Orn. p. 104., Levaill. Hist. Nat. Prom. Suppl. t. B. — Baryphonus ruficapillus *Vieill.* Gal. des Ois. t. 190.

6. M. *Martii* Spix, Av. Bras. t. 60.

7. M. *mexicanus* Swains. Zool. Ill. n. s. pl. 81. — Momotus Martii *Jard. & Selby*, Ill. Orn. pl. 23.

8. M. *platyrhynchus* Leadb. Linn. Trans. xvi. p. 92., Jard. & Selby, Ill. Orn. pl. 106.

9. M. *momotula* Licht. Trans. Acad. Berl. 1838. t. 4.

10. M. *superciliaris* Sandb. Jard. & Selby, Ill. Orn. n. s. pl. 18. — Crypticus superciliosus *Swains.*; C. apiaster *Less.*

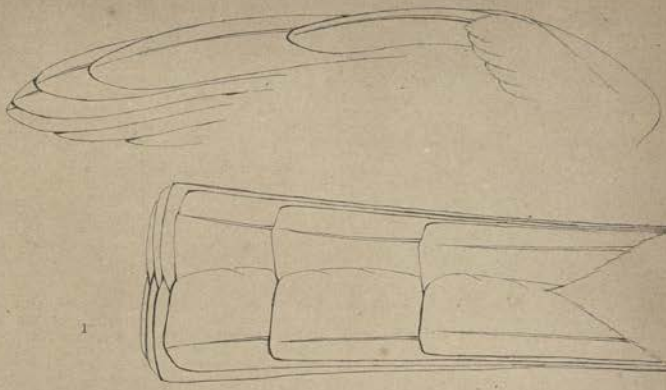
11. M. *gularis* Lafr. Rev. Zool. 1840. p. 130.

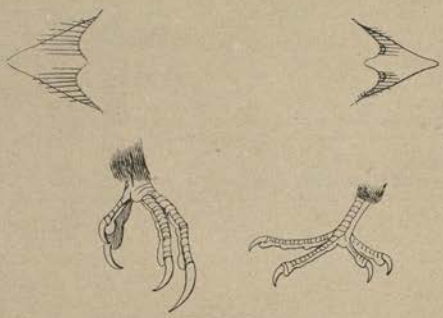
12. M. *Lessonii* Less. Rev. Zool. 1842. p. 174.

13. M. *yucatanensis* Cabot, Proc. Bost. Nat. Hist. Soc. 1843. p. 156. 1844. p. 466.

September, 1847.

CALURUS auriceps Gould.





C. Hullmandel's Patent Lithotint.

1. TROGON puella. 2. CALURUS resplendens. 3. HARPACTES Diardii. 4. APALODERMA narina. 5. PRIOTELUS temnurus.

The fourth Family,

TROGONIDÆ, or TROGONS,

have the Bill short, strong, subtriangular, broader at the base than elevated, with the tip and the margins generally toothed; the Gape furnished with bristles; the Nostrils basal, lateral, more or less concealed by the projecting feathers; the Wings moderate and rounded, with the fourth and fifth quills usually the longest; the Tail long and even, with the lateral feathers graduated; the Tarsi short, and more or less covered with feathers; the Toes placed two anteriorly and two posteriorly, each pair unequal.

TROGON *Mœhr.**

Bill strong, short, the base very broad, and the culmen much curved to the tip, which is emarginated, the sides compressed, and the lateral margins serrated; the nostrils basal, lateral, and entirely concealed by the frontal plumes and bristles. *Wings* moderate, with the fourth and fifth quills equal and longest. *Tail* long, with the middle feathers even, and the lateral feathers graduated. *Tarsi* short, and entirely concealed by short plumes, their entire length. *Toes* moderate; the two anterior ones unequal, and united as far as the first joint.

These splendid birds are peculiar to tropical America. In the gloomy shades of the forests they live solitary, and remain motionless on the branches, among the thick foliage, during the heat of the day; but early in the morning and in the evening they seek the more open though still shady parts, and take up some position from which they can observe and dart after the insects flying near, on which they principally subsist. Their flight is rapid and undulating, though not prolonged to any great distance. The nest is placed in holes formed by means of the bill in rotten trees, or in the nest of a species of ant that burrows in them. The female lays from three to four eggs on the bare dust.

1. T. *Curucui* Linn. Pl. enl. 452. 737., Le Vaill. Hist. Nat. Cour. t. 1, 2. — Trogon melanurus *Swains.* Gould, Monogr. Trog. pl. 18.
2. T. *Curucura* Vieill. N. Dict. Hist. Nat. viii. 322., Azara No. 270., Gould, Monogr. Trog. pl. 15.
3. T. *viridis* Linn. Le Vaill. Hist. Nat. Cour. t. 3, 4. — Trogon violaceus *Gmel.*; T. strigilatus *Gmel.* Pl. enl. 765.; T. melanopterus *Swains.* Gould, Monogr. Trog. pl. 10, 11.
4. T. *lepturus* Swains. Two Cent. and a Quart. p. 331., Pl. enl. 195. — Trogon rufus *Gmel.* Pl. enl. 736.; T. scalaris *Licht.*? Le Vaill. Hist. Nat. Cour. t. 9.; T. atricollis (*Vieill.*) *Gould.*
5. T. *atricollis* (Vieill.) N. Dict. Hist. Nat. viii. 318., Edwards's Birds, pl. 331., Le Vaill. Hist. Nat. Cour. t. 7, 8. 15., Gould, Monogr. Trog. pl. 8.
6. T. *sulphureus* Spix, Av. Bras. t. 38. — Trogon meridionalis *Swains.* Gould, Monogr. Trog. pl. 9.
7. T. *aurantius* Spix, Av. Bras. t. 36., Gould, Monogr. Trog. pl. 14.
8. T. *collaris* Vieill. N. Dict. Hist. Nat. viii. 320. — Trogon rosalba *Cuv.* Le Vaill. Hist. Nat. Cour. t. 6., Gould, Monogr. Trog. pl. 5.; T. auratus *Swains.*
9. T. *variegatus* Spix, Av. Bras. t. 38*., Gould, Monogr. Trog. pl. 6.
10. T. *roseigaster* Vieill. Ency. Méth. iii. 1358., Le Vaill. Hist. Nat. Cour. t. 13. — Trogon domicellus *Cuv.*; T. rhodogaster *Temm.*; Temnurus? roseigaster *Gould,* Monogr. Trog. pl. 20.
11. T. *ambiguus* Gould, Proc. Z. S. 1835. 30., Monogr. Trog. pl. 4.
12. T. *citreolus* Gould, Proc. Z. S. 1835. 30., Monogr. Trog. pl. 13. — Trogon chrysogaster *Swains.*
13. T. *elegans* Gould, Proc. Z. S. 1835. 26., Monogr. Trog. pl. 3.

* Established in 1752, by Mœhring, in his *Genera Avium.*

14. T. *purpuratus* Swains. Two Cent. and a Quart. p. 330., Birds of Braz. 63, 64.
15. T. *leucurus* Swains. Two Cent. and a Quart. p. 331., Azara No. 270. ?
16. T. *mexicanus* Swains. Ann. Phil. 1827., Zool. Illustr. n. s. pl. 82, 83., Gould, Monogr. Trog. pl. 1, 2. — Trogon glocitans *Licht.*
17. T. *melanocephalus* Gould, Monogr. Trog. pl. 12.
18. T. *caligatus* Gould, Monogr. Trog. pl. 7.
19. T. *Massena* Gould, Monogr. Trog. pl. 16.
20. T. *macrourus* Gould, Monogr. Trog. pl. 17.
21. T. *Leverianus* Shaw, Lev. Mus. pl. p. 175. — Trogon albiventer *Cuv.* Le Vaill. Hist. Nat. Cour. t. 5.
22. ? T. *castaneus* Spix, Av. Bras. t. 37.
23. T. *personatus* Gould, Ann. N. H. ix. 237.
24. T. *puella* Gould, Proc Z. S. 1845.

Priotelus.*

Characters similar to the last; but the lateral margins of both mandibles dentated, and the tip emarginated; the nostrils basal, lateral, and partly concealed by the frontal plumes. *Tail* long and broad, with the tip of each feather diverging. *Tarsi* short, naked, and scutellated. *Toes* long, slender, and the two anterior ones free at the base.

This singular bird appears to be peculiar to Cuba. It is said to procure its food from the bark by searching it for larvæ and various insects.

P. *temnurus* (Temm.) Pl. col. 326. — Temnurus albicollis *Swains.* Gould, Monogr. Trog. pl. 19., Voy. l'Ile de Cuba, Ois. t. 26.

Apaloderma *Swains.*†

This division is known from the others of this subfamily by the lateral margins of the upper mandible being nearly smooth, those of the lower strongly serrated. *Tarsi* moderate, naked, and scutellated. *Toes* long, slender, and the two anterior ones free at the base.

The type of this subgenus is peculiar to South Africa, where it resides in the densest parts of the forest. It is usually seen seated motionless on a branch, until it is called into activity by the appearance of a passing insect, which it endeavours to capture by rapid flight, after which it returns to the same station, or one not far from it. Various kinds of winged insects are taken in this manner, especially during the morning and evening. The eggs are deposited in a hole of a tree, to the number of four or five.

A. *narina* (Vieill.) Swains. N. Dict. Hist. Nat. viii. 318., Le Vaill. Ois. d'Afr. t. 228, 229., Gould, Monogr. Trog. 26.

Harpactes *Swains.*‡

The birds of this subgenus are known by the lateral margins of both mandibles being smooth, but emarginated at the tip; the nostrils basal, lateral, large, and partly closed by a membrane. *Tarsi* short, and half-covered with short plumes. *Toes* moderate, and the two anterior ones united for half their length.

* This division was originally proposed by Mr. Swainson (1837) under the name of *Temnurus*, but that word having been previously employed in Ornithology, it was altered to the above by me in 1840.
† Established by Mr. Swainson in 1837 (*Class. of Birds*, ii. 337.).
‡ Established by Mr. Swainson (*Class. of Birds*, ii. 337.) in 1837.

India and its Archipelago are the countries of these birds; which reside in the densest portions of the thick forests and jungles. They are usually noticed seated quietly on the branches of a lofty tree, with their heads sunk into their shoulders, uttering a monotonous melancholy note, frequently repeated; occasionally darting off to seize an insect, and then returning to the same perch, or more generally alighting at a new position, and thus wandering about from tree to tree. Dr. Packman informs me that he believes these birds bite off and reject hard portions, such as legs, wings, &c., and swallow only the soft parts, such as the abdomen; the formation of the beak seems well adapted for this operation.

1. H. *malabaricus* (Gould), Swains. Proc. Z. S. 1834. 26., Gould, Monogr. Trog. pl. 31.
2. H. *erythrocephalus* (Gould), Swains. Proc. Z. S. 1834. 25., Gould, Monogr. Trog. pl. 33. — Trogon fasciatus *Penn.* ?
3. H. *Hodgsoni* Gould, Monogr. Trog. pl. 34.
4. H. *Temminckii* (Gould), Swains. Monogr. Trog. pl. 29. — Trogon fasciatus *Temm.* Pl. col. 321.; T. Kondea *Raffl.* ?
5. H. *rutilus* (Vieill.) N. Dict. Hist. Nat. viii. 313., Le Vaill. Hist. Nat. Cour. t. 14. — Trogon cinnamomeus *Temm.*; T. Kassumba *Raffl.* ?; T. Duvaucelii *Temm.* Pl. col. 291., Gould, Monogr. Trog. pl. 32.; T. fasciatus var. β *Lath.* ?
6. H. *Diardii* (Temm.) Swains. Pl. col. 541., Gould, Monogr. Trog. pl. 30.
7. H. *ardens* (Temm.) Gould, Pl. col. 404., Gould, Monogr. Trog. pl. 35.
8. H. *oreskios* (Temm.) Gould, Pl. col. 181., Gould, Monogr. Trog. pl. 36.
9. H. *Reinwardtii* (Temm.) Pl. col. 124. — Apalodema Reinwardtii *Swains.* Gould, Monogr. Trog. pl. 27.
10. H. *gigas* (Vieill.) N. Dict. Hist. Nat. viii. 315., Le Vaill. Hist. Nat. Cour. t. 12. — Trogon Temminckii *Cuv.*; Apaloderma gigas *Gould*, Monogr. Trog. pl. 28.
11. H. ? *indicus* (Lath.).

Calurus *Swains.**

The *Bill* of this division differs from the others by the lateral margins being smooth and curved to the tip, which is emarginated. *Wings* with the coverts prolonged and curved. *Tail* with the upper coverts greatly prolonged, concealing the tail, which is moderate, even in the middle, and has the lateral feathers graduated. *Tarsi* short, and partly covered with plumes. *Toes* long, strong, and the two anterior ones united at the base.

The remarkably showy birds that compose this division are found only in the hottest parts of South America. It is in the humid and thick forests, on the margins of the great rivers or near torrents, that they may be observed on the highest branches of the loftiest trees, searching for the fruits and berries on which they chiefly live. Some seem to prefer the fruits of certain palm trees, and are said to cling to the branches in the manner of parrots. During the morning and evening, they utter a monotonous cry, repeating their vernacular name, *Couroucou*.

1. C. *resplendens* (Gould), Swains. — Trogon pavoninus *Temm.* Pl. col. 372., Gould, Monogr. Trog. pl. 21.
2. C. *pavoninus* (Spix), Swains. Spix, Av. Bras. t. 35., Gould, Monogr. Trog. pl. 23.
3. C. *pulchellus* Gould, Monogr. Trog. pl. 22. — Trogon peruvianus *Gould.*
4. C. *fulgidus* Gould, Monogr. Trog. pl. 24.
5. C. *neozenus* Gould, Monogr. Trog. pl. 25.
6. C. *auriceps* Gould, Ann. N. H. ix. 238.
7. C. *antisianus* D'Orb. Mag. de Zool. 1837. Ois. t. 85.

* Mr. Swainson established this subgenus (*Class. of Birds*, ii. 337.) in 1837.

ALCOLMSON TESTIMONIAL

Hullmandel & Walton Lithographers.

BUCCO
pectoralis. G. R. Gray.

Hollmandel & Walton Lithographers

1. BUCCO bicincta. 2. CHELIDOPTERA tenebrosa. 3. MONASA rufa

The fifth Family,

ALCEDINIDÆ, or KINGFISHERS,

have the Bill more or less lengthened, generally straight, and broad at the base, with the tips of both mandibles usually acute; the Nostrils lateral; the Wings more or less long and rounded; the Tail mostly short, and rounded on the sides; the Tarsi short and strong; the Toes long, sometimes three before and one behind, and sometimes two and two, and of various lengths.

The first Subfamily,

BUCCONINÆ, or PUFFBIRDS,

have the Bill of various lengths, elevated and broad at the base, with the tip curved and sometimes hooked over that of the lower mandible; the Nostrils lateral, basal, and hidden by the frontal plumes and bristles; the Wings more or less long, with the third to the fifth quills usually the longest; the Tail mostly of moderate length; the Tarsi short and robust, with the Toes two before and two behind, and of various lengths, the outer anterior toe the longest.

BUCCO *Linn.**

Bill more or less long, elevated, and very broad at the base, with the culmen sloping, and suddenly curved at the tip, which is more or less hooked, and sometimes bifid at the extreme end; the sides much compressed towards the tip, the lateral margins straight, and the gonys very long and curved upwards; the nostrils lateral, and sunk in a short membranous groove, with the opening anterior, somewhat rounded, and concealed by the projecting plumes and bristles. *Wings* moderate and rounded, with the first quill short, and the fourth the longest. *Tail* long, broad, even, and rounded on the sides. *Tarsi* shorter than the middle toe, strong, and covered in front with transverse scales. *Toes* of various length, the outer anterior longer than the outer posterior toe; the claws long, compressed, and acute.

* Linnæus established this genus in 1766. *Tamatia* of Cuvier (1817), *Capito* of M. Temminck (1820), *Cyphos* of Spix (1824), *Chaunornis* of G. R. Gray (1841), and *Nyctactes* of Mr. Strickland (1841) are synonymous.

The species of this genus are found in the tropical parts of America. They chiefly live solitary, pensive, and silent, in the most retired parts of the woods, where they choose some low branch, well concealed by foliage, on which they perch, with their large head resting between the shoulders, for a long time together; but they are called into activity by the appearance of coleopterous insects, after which they dart, and having secured them, return again to the same perch, which they are said to frequent for months together. They are stated occasionally to support themselves on the trunks of trees by means of their tails in the manner of woodpeckers, while capturing the coleopterous insects that usually abound in them.

1. B. *collaris* Lath. Pl. enl. 395. — Bucco capensis *Linn.*, Le Vaill. Ois. de Parad. t. 42.
2. B. *macrorhynchus* Gmel. Pl. enl. 689., Le Vaill. Ois. de Parad. t. 39.
3. B. *Swainsoni.*—Tamatia macrorhynchus *Swains.* Zool. Illustr. pl. 99.
4. B. *pectoralis* G. R. Gray.
5. B. *tectus* Bodd. Pl. enl. 688. f. 2. — Bucco melanoleucus *Gmel.*, Le Vaill. Ois. de Parad. t. 40.
6. B. *macrodactylus* (Spix), Av. Bras. t. 39. f. 2. — Capito Cyphos *Wagl.*; Type of Cyphos *Spix* (1824).
7. B. *bicinctus* (Gould), Proc. Z. S. 1836. p. 80. — Tamatia bitorquata *Swains.*
8. B. *gularis* (D'Orb. & Lafr.) Rev. Zool. 1838. p. 166.
9. B. *ruficollis* Licht. Isis, 1829. p. 658.
10. B. *tamatia* Gmel. Pl. enl. 746. f. 1., Le Vaill. Ois. de Parad. t. 41. — Tamatia maculata *Swains.*, B. of Braz. 11.; Type of Chaunornis *G. R. Gray* (1841).
11. B. *chacura* (Vieill.) N. Dict. d' Hist. Nat., Azara, No. 261. — Bucco strigilatus *Licht.*; Capito melanotis *Temm.* Pl. col. 94.
12 B. *leucotis* (Swains.) B. of Braz. 10.
13. B. *maculatus* Gmel. Le Vaill. Ois. de Parad., Suppl. t. F. — Bucco somnolentus *Licht.* Swains. B. of Braz. 9.

Monasa *Vieill.**

Bill long, broad and elevated at the base, with the culmen and lateral margins much curved, and the sides much compressed to the tip, which is acute; the gonys long and ascending in a curve; the nostrils lateral, and placed in a short membranous groove, with the opening anterior, and covered by the projecting plumes and bristles. *Wings* moderate and rounded, with the fourth and fifth quills longest. *Tail* very long, broad, and rounded. *Tarsi* shorter than the middle toe, and covered in front with transverse scales. *Toes* unequal, the outer anterior toe the longest; the claws short, much compressed, and acute.

The birds that compose this division are found in tropical America, and their habits and manners are very similar to those of the last genus.

1. M. *atra* (Bodd.) Pl. enl. 512., Le Vaill. Ois. de Parad. t. 44, 45.—Cuculus tranquillus, Bucco cinereus et Corvus australis *Gmel.*; B. calcaratus *Lath.*; Corvus affinis *Shaw.*
2. M. *nigrifrons* (Spix), Av. Bras. t. 43. f. 2. — Lypornix unicolor *Wagl.*
3. M. *leucops* (Licht.) Cat. Dupl. Berl. Mus. p. 8. — Bucco albifrons *Spix*, Av. Bras. t. 41. f. 1.; Monasa personata *Vieill.*, Swains. B. of Braz. 12., Gal. des Ois. t. 36.
4. M. *fusca* (Gmel.) Pr. Bonap., Le Vaill. Ois. de Parad. t. 43.—Bucco torquatus *Hahn*, Ausl. Vög. Heft. 13. t. 5.; B. striatus *Spix*, Av. Bras. t. 40. f. 2., Swains. B. of Braz. 34.; Type of Malacoptila *G. R. Gray* (1841.).
5. M. *rufa* (Spix), Av. Bras. t. 40. f. 1.
6. M. *rubecula* (Spix), Av. Bras. t. 39. f. 1. — Monasa phaioleucos *Temm.* Pl. col. 323 f. 2., Swains. B. of Braz. 35.
7. M. *ruficapilla* (Tschudi), Fauna Peruana, p. 40.

* Established by Vieillot in 1816 (*Analyse, &c.* p. 27.). *Lypornix* of Wagler (1827), *Scotocharis* of M. Gloger (1827), *Monastes* of Nitzsch (1840), and *Malacoptila* of G. R. Gray (1841) are coequal to the name employed.

CHELIDOPTERA *Gould.**

Bill shorter than the head, elevated and broad at the base, with the culmen and lateral margins and the sides much compressed to the tip, which is acute; the gonys and lateral margins of the lower mandible curved to the acute tip; the nostrils lateral, with the opening rounded, and concealed by the frontal plumes and bristles. *Wings* lengthened, and reaching nearly to the end of the tail, with the third and fourth quills equal and longest. *Tail* very short and even. *Tarsi* very short, and covered in front with broad transverse scales. *Toes* of various sizes, the outer anterior toe the longest.

This genus is at present composed but of one species, which is said to possess a powerful flight: it usually resorts to the topmost branches of the trees, from whence it sallies forth over the forest in search of insects, which constitute its chief food.

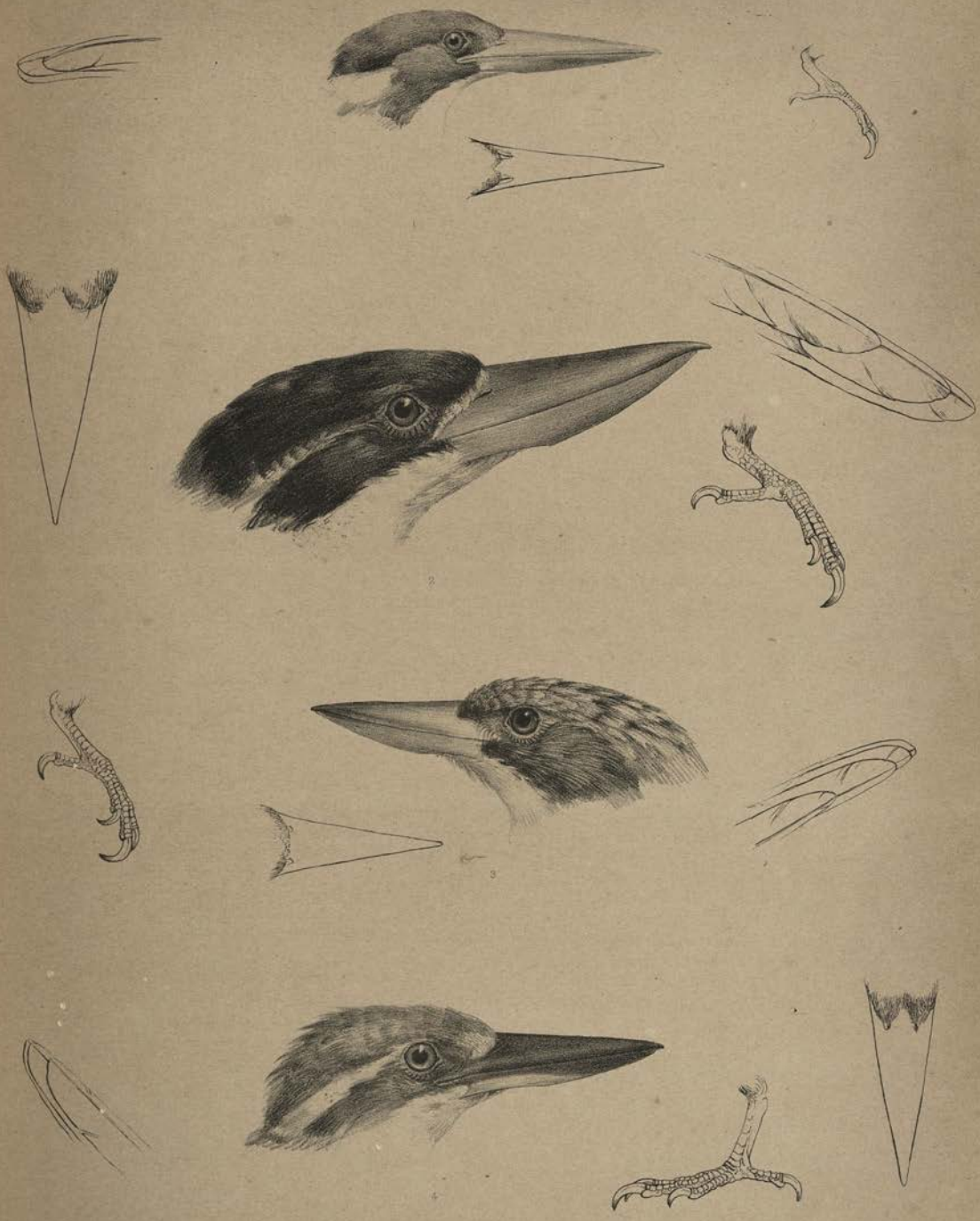
C. *tenebrosa* (Pall.) Gould, Pl. enl. 505. — Le Vaill. Ois. de Parad. t. 46., Pl. col. 323. f. 1., Swains. B. of Braz. 36.

* Mr. Gould established this genus in 1836 (*Proc. Z. S.* 1836, p. 81.). *Brachypetes* of Mr. Swainson (1837) is coequal.

December, 1846.

C. Hullmandel's Patent Lithotint

HALCYON
Lindsayi. / Vig. / juv. - Dacelo lidens. Vig.



1. CEYX purpurea. 2. DACELO Gaudichaudi. 3. TANYSIPTERA Dea. 4. HALCYON superciliosa.

The second Subfamily,

HALCYONINÆ, or CRAB-HUNTERS,

have the Bill broad at the base, and gradually compressed towards the tip; the lateral margins straight, or turned upwards towards the end of the upper mandible; the gonys lengthened, and gradually ascending, or curved upwards to the tip of the lower mandible.

DACELO *Leach.**

Bill long, very broad, and elevated at the base, with the sides compressed, and the culmen straight towards the tip, which is much compressed and slightly hooked; the lateral margins curved up and sinuated near the end; the gonys curved upwards to the tip of the lower mandible; the nostrils basal, lateral, the opening small, longitudinal, and exposed. *Wings* moderate, with the first quill long, and the third, fourth, and fifth nearly equal and longest. *Tail* moderate and rounded. *Tarsi* very short, robust, and covered with small scales. *Toes* long and unequal; the inner toe short, and united to the middle as far as the first joint; the outer long, and united to near the third joint; the hind toe moderate; and all broadly padded beneath: the claws long, compressed, and curved.

Most of the birds that compose this genus are found in Australia, but others have been discovered in New Guinea. They are by no means shy birds, and are usually seen perched on the dead branches of trees, whether in the thinly wooded forests or on those that are scattered on the arid plains. Their flight is noiseless and quick. They feed on small quadrupeds, reptiles, insects, and crabs, and even chickens do not escape them; and "it is not uncommon to see these birds fly up with a long snake pending from their beak, the bird holding the reptile by the neck, just behind the head; but as the snake hangs down without motion, and appears dead, it is probable that the bird destroys them" by means of its bill "upon the ground, before it conveys them into the tree." Mr. G. Bennett also informs us that these birds possess a "peculiar gurgling laugh, commencing in a low and gradually rising to a high and loud tone, and are often heard by the traveller, in all parts of the colony, sending forth their deafening noises whilst remaining perched upon the lofty branch of a tree watching for prey:" and he further remarks that "it rises with the dawn, when the woods reecho with its gurgling laugh; at sunset it is again heard; and as that glorious orb sinks in the west, a last 'good night' is given in its peculiar tones to all within hearing." It is in holes of trees that the females deposit their eggs, simply laying them on the bare wood at the bottom of the cavity.

* Established by Leach in 1815 (*Zoological Miscellany*). *Paralcyon* (1827) of M. Gloger and *Choncalcyon* (1831) of M. Lesson are synonymous. It embraces *Melidora* of M. Lesson (1831).

1. D. *gigas* (Bodd.) G. R. Gray, Pl. enl. 663. — Alcedo fusca *Gmel.*; Al. gigantea *Lath.* Leach, Zool. Misc. pl. 104., Sonn. Voy. N. Guin. t. 106.; Al. undulata *Scop.*; Choncalcyon australe *Less.* Gould, B. of Austr. pl.

2. D. *cervina* Gould, B. of Austr. pl. ., Voy. au Pole Sud, t. 23. f. 1. ?

3. D. *Leachii* Lath. MSS. Linn. Trans. xv. p. 205.

4. D. *Gaudichaudii* Quoy Gaim, Voy. de l'Uranie, Ois. t. 25.

5. D. *cyanotis* Temm. Pl. col. 262.

6. D. *macrorhyncha* Less. Voy. de la Coqu. Ois. t. 31. bis, f. 2. — Melidora euphrosiæ *Less.*; Type of Melidora *Less.* (1831).

Tanysiptera *Vigors.**

Bill long, broad, and elevated at the base; the sides gradually compressed, and the culmen straight to the tip, which is acute; the lateral margins straight or slightly curved, and the gonys ascending; the nostrils basal and lateral, with the opening rounded and exposed. *Wings* moderate, with the first three quills graduated, with the fourth the longest. *Tail* long and cuneated, with the middle feathers much lengthened, and the tip spatuliformed. *Tarsi* shorter than the toes, covered in front with transverse scales. *Toes* long and unequal; the inner toe short, and united to the second joint, the outer one long, and united to the third joint, of the middle toe; and the hind toe moderate: the claws moderate, compressed, and curved.

These showy birds are found in New Guinea and the Philippine Islands.

1. T. *Dea* (Linn.) Vigors, Pl. enl. 116.

2. T. *Nympha* G. R. Gray, Ann. of Nat. Hist. 1841. p. 238.

Halcyon *Swains.*†

Bill long, broad at the base, sometimes depressed, with the sides gradually compressed, and the culmen more or less straight to the tip, which is acute; the lateral margins usually straight, and the gonys more or less straight and ascending; the nostrils basal and lateral, placed in a small membranous space, with the opening small, longitudinal, and partly concealed by the projecting plumes. *Wings* moderate, with the first quill long, and the third the longest. *Tail* moderate, and rounded on the sides. *Tarsi* very short, rather slender, and covered in front with transverse scales. *Toes* moderate and unequal; with the outer toe long, and united to the third joint, and the inner to the second joint, of the middle toe: the claws moderate, compressed, and acute.

These birds are found in Africa, India and its archipelago, Australia, and the islands of the South Seas. They generally reside, singly or in pairs, in the moist open forests or jungles on the sides of rivers and brooks, though some species are rarely observed in the neighbourhood of water, while others frequent cultivated places and plains. When flying, they usually utter a loud rattling scream. They often sit for a long time on a pole or the lower branch of a

* Established by Vigors in 1829 (*Zoological Journal*, p. 266.).

† Established by Mr. Swainson in 1821 (*Zoological Illustrations*). It embraces *Syma* and *Todiramphus* of M. Lesson (1828), also *Actenoide* of MM. Hombron and Jacquenot.

tree, watching the space around them for the appearance of small reptiles, fish, crabs, insects, and their larvæ, which constitute their chief subsistence. Some species examine the flowers of the cocoa nut trees for the insects that are found within them. The nest is formed in the hollow trunks of trees; and the eggs are usually three or four in number.

1. H. *senegalensis* (Linn.) Swains. Pl. enl. 594. — Alcedo semicærulea *Forsk.*
2. ? H. *cinereifrons* (Vieill.) N. Dict. d'Hist. Nat. xix. p. 403., Gal. des Ois. t. 187.
3. H. *senegaloïdes* A. Smith, S. Afr. Quart. Journ. i. p. 144., Ill. S. Afr. pl. 63.
4. H. *fuscicapilla* (Lafr.) Hartl. Mag. de Zool. 18 ., Ois. t. 18.
5. H. *torquata* Swains. B. of W. Afr. ii. p. 99.
6. H. *chelicuti* (Stanl.) — Alcedo striolata *Licht.*; Al. variegata *Vieill.*; Dacelo pygmæa *Cretschm.* Rüpp. Atlas, Zool. t. 28.
7. H. *erythrogaster* (Temm.) Pl. enl. 356. — Alcedo cancrophaga *Forst.* Descr. Anim. p. 4., Icon. ined. 60.; Halcyon erythrorhyncha *Gould*; H. rufiventer *Swains.* B. of W. Afr. ii. p. 101. . 12.; H. Swainsoni *A. Smith*, S. Afr. Quart. Journ. i. p. 144.; Dacelo Actæon *Less.*
8. H. *pileata* (Bodd.) Pl. enl. 673. — Alcedo atricapilla *Gmel.*; Al. brama *Less.* Cent. Zool. t. 8.
9. H. *albiventris* (Scop.) Sonn. Voy. Ind. t. 31.
10. H. *cancrophaga* (Bodd.) Pl. enl. 334.
11. H. *smyrnensis* (Linn.) Albin's Birds, pl. 37.
12. H. *fusca* (Bodd.) Pl. enl. 894. — Alcedo smyrnensis var.; Halcyon albogularis *Blyth.*; Al. rufirostris *Licht.* Kittl. Kupfer. Vög. t. 14. f. 2. ?
13. H. *gularis* (Kuhl), Pl. enl. 232. — Halcyon ruficollis *Swains.*; Alcedo melanoptera *Temm.*
14. H. *capensis* (Linn.) Pl. enl. 590.
15. H. *javana* (Bodd.) Pl. enl. 757. — Alcedo leucocephala *Gmel.*; A. javanica *Shaw*, Nat. Misc. pl. 793.
16. H. *amauroptera* Pears. Journ. A. S. B. 1841. p. 635.
17. H. *albicilla* (Less.) Tr. d'Orn. p. 247. — Halcyon sauropaga *Gould*, Proc. Z. S. 1843. p. 103., Voy. of Sulphur, Birds, pl.
18. H. *melanoptera* (Horsf.) Linn. Trans. xiii. p. 174. — Alcedo omnicolor *Temm.* Pl. col. 135.; Al. cyanoventris *Vieill.*
19. H. *melanorhyncha* (Temm.) Pl. col. 391.
20. H. *coromandeliana* (Scop.) Sonn. Voy. Ind. t. 118. — Alcedo coromanda *Gmel.*; Halcyon lilacina *Swains.*
21. H. *pulchella* (Horsf.) Linn. Trans. xiii. p. 175., Zool. Res. in Java, pl. — Dacelo buccoïdes *Temm.* Pl. col. 586. & 277.
22. H. *concreta* (Temm.) Pl. col. 346.
23. H. *monachus* (Temm.).
24. H. *diops* (Temm.) Pl. col. 272.
25. H. *lazuli* (Temm.) Pl. col. 508.
26. H. *Lindsayi* (Vigors), Proc. Z. S. 1831. p. 97., Voy. de la Bonite, Ois. t. 7. — Dacelo Lessoni *Vigors.*
27. H. *ruffula* Lafr. Rev. Zool. 1838. p. 224.
28. H. *leucogaster* Tr. Proc. Z. S. 1843. p. 4.
29. H. *sordida* Gould, Proc. Z. S. 1842. p. 72.
30. H. *coronata* Müll. & Schl. Verd. Nat. Gesch. Nederl. p. 175.
31. H. *sancta* Vig & Horsf. Linn. Trans. xv. p. 206., Philip's Voy. pl. p. 156. ? Gould, Syn. B. of Austr. pl. f. . — Alcedo australasiæ *Vieill.*
32. H. *collaris* Swains. Zool. Ill. pl. 27., Gould, Syn. B. of Austr. pl. . f.
33. H. *cinnamomina* Swains. Zool. Ill. pl. 67., Gould, Syn. B. of Austr. pl. . f.
34. H. *Macleayii* Jard. & Selby, Ill. Orn. pl. 101. — Halcyon incinctus *Gould*, Proc. Z. S. 1837. p. 142., B. of Austr. pl.
35. H. *pyrrhopygia* Gould, Proc. Z. S. 1840. p. 113., B. of Austr. pl.
36. H. *vagans* (Less.) G. R. Gray, Voy. Ereb. and Terr. Zool. pl. 1. Birds, pl. 1. — Alcedo sacer var. *Lath.*; Al. cyanea *Forst.* Desc. An. p. 76., Icon. ined. 59.
37. H. *venerata* (Gmel.).
38. H. *varia* Eyton, Proc. Z. S. 1839. p. 101.
39. H. *chloris* (Bodd.) Pl. enl. 783. f. 2. — Alcedo chlorocephala *Gmel.*; Al. collaris *Scop.* Sonn. Voy. t. 33., Kittl. Kupfer. t. 14. f. 1.
40. H. *tricolor* (Vieill.) Encycl. Méthod. i. p. 398.
41. H. *cyanoleuca* (Vieill.) Dict. d'Hist. Nat. xix. p. 401.
42. H. *variegata* (Vieill.) Encycl. Méthod. i. p. 397.
43. H. *cærulea* (Linn.) Pl. enl. 783. f. 1. — Todus pictus *Bodd.*; Alcedo ultramarina *Daud.*; Halcyon cyanotis *Swains.*
44. H. *sacra* (Gmel.) Lath. Gen. Syn. pl. 27., Mém. Soc. d'Hist. Nat. Paris, iii. t. 11.; Type of Todiramphus *Less.* (1828).
45. H. *tutu* Gmel. — Alcedo collaris *Forst.* Descr. An. p. 162, Icon. ined. 58.; Todiramphus divinus *Less.* Mém. Soc. d'Hist. Nat. Paris, iii. t. 12.
46. H. *platyrostris* Gould, Proc. Z. S. 1842. p. 72. — Todiramphus recurvirostris *Lafr.* Rev. Zool. 1842. p. 135.
47. H. ——— (Homb. & Jacq.) Voy. au Pole Sud, Ois. t. 23. f. 2. — Type of Actenoide of *Homb. & Jacq.* (1846?).
48. H. *torotoro* Less. Voy. de la Coqu. Ois. t. 31. f. 1. — Syma Lessonia *Swains.*; Type of Syma *Less.* (1828).

Ceyx *Lacep.**

Bill long, and broad at the base, with the sides gradually compressed, and the culmen straight to the tip, which is acute; the lateral margins straight, and the gonys straight and ascending; the nostrils basal, lateral, and placed in a membranous space, with the opening longitudinal. *Wings* moderate, with

* Established between 1800 and 1801 by Lacépède (*Mém. de l'Inst.*).

the first quill long, and the second and third nearly equal and longest. *Tail* very small and rounded. *Tarsi* very short, and rather slender. *Toes* long; the inner toe wanting; the middle and outer toes long, and united to the third joint of the former; and the hind toe short: the claws moderate, compressed, and slightly curved.

It is in India and its archipelago that the species of this genus are found.

1. C. *tridactyla* (Linn.) Cuv. Pall. Spic. vi. t. 2. f. 1. — Ceyx luzoniensis *Steph.* Sonn. Voy. Ind. t. 32., Jard. & Selby, Ill. Orn. pl. f.

2. C. *rubra* (Bodd.) Pl. enl. 778. f. 2. — Alcedo purpurea *Gmel.*

August, 1846.

Hullmandel & Walton's new Process

ALCEDO
picta. (Bodd:)

The third Subfamily,

ALCEDININÆ, or KINGFISHERS,

have the Bill more or less long, straight, and slender, with the culmen sloping to the tip, which is acute; the sides much compressed; and the gonys long and ascending.

ALCEDO *Linn.**

Bill more or less long, slender, and straight, with the culmen sloping to the tip, which is acute; the sides compressed; the lateral margins straight; the gonys lengthened, and slightly sloping upwards; the nostrils basal, with the opening oblique and covered by a membranous plumed scale. *Wings* short, with the first quill nearly as long as the second and third, which are equal and longest. *Tail* short, broad, and rounded. *Tarsi* very short, and robust. *Toes* unequal; the outer toe nearly as long as the middle one, and united nearly to the tip; the inner toe short, and united at the base; the hind toe rather short, and broad; the claws short, compressed, and curved.

The species of this genus are found in most parts of the Old World. They frequent the fresh-water rivers, and are usually observed solitary, perched on an overhanging branch, or flying near the surface while hunting for their prey, which consists entirely of fish. They are sometimes noticed fluttering over a spot, and then suddenly precipitating themselves upon a fish when rising to the surface. If the fish is too large to be swallowed whole, they beat it into pieces, and swallow each piece separately. The nest is placed at the end of a long gallery formed in the sandy banks to the depth of two or three feet, which they excavate with their bill and feet. The female usually lays from six to seven eggs, which are placed on ejected pellets of fish bones.

1. A. *ispida* Linn. Pl. enl. 77. — Gracula Atthis *Gmel.*
2. ? A. *bengalensis* Gmel. Edwards's Birds, pl. 11. — Alcedo hispidioides *Less.* Kittl. Kupf. Vög. t. 29. f. 2.
3. A. *euryzona* Temm. Pl. col. (descr.).
4. A. *meninting* Horsf. Linn. Trans xiii. p. 172., Pl. col. 239. f. 2. — Alcedo asiatica *Swains.* Zool. Illustr. pl. 50.
5. A. *biru* Horsf. Linn. Trans. xiii. p. 172., Zool. Res. in Java pl., Pl. col. 239. f. 1.
6. A. *semitorquata* Swains. Zool. Illustr. pl. 151.
7. ? A. *cærulea* Gmel. Briss. Orn. iv. t. 37. f. 2. A., Shaw, Nat. Misc. pl. 269.
8. A. *cæruleocephala* Gmel. Pl. enl. 356. f. 1.
9. A. *cyanostigma* Rüpp. Faun. Abyss. t. 24. f. 2.
10. A. *cristata* Linn. Briss. Orn. iv. t. 37. f. 3., Pl. enl. 756. f. 1., Kittl. Kupf. Vög. t. 29. f. 3.
11. A. *vintsioïdes* Eyd. et Gerv. Mag. de Zool. 1836., Ois. t. 74.
12. A. *erithaca* Linn. Shaw, Nat. Misc. pl. 317.
13. A. *madagascariensis* Linn. Pl. enl. 778. f. 1.
14. ? A. *cærulescens* Vieill. N. Dict. d'Hist. Nat. xix. p. 401.
15. ? A. *orientalis* Gmel. Briss. Orn. iv. t. 37. f. 1. A.
16. ? A. *flavicans* Gmel.
17. ? A. *cyanoleuca* Vieill. N. Dict. d'Hist. Nat. xix. p. 401.
18. ? A. *variegata* Vieill. Ency. Méth. p. 397.
19. ? A. *tricolor* Vieill. Ency. Méth. p. 398.

* Originally established by Linnæus under the name of *Ispida* in 1735, but changed by him in 1756 to the above name.

ALCYONE *Swains.**

Differs from the former genus by the total absence of the inner toe.

The species that compose this division are found in the Indian Archipelago, New Guinea, and Australia. Their habits and manners are similar to those of the former genus.

1. A. *azurea* (Lath.) Swains. Zool. Ill. pl. 26., Jard. & Selby, Illustr. Orn. t. 55. f. 1., Lewin, B. N. H. pl. — Alcyone australis *Swains.*; A. tribrachys *Shaw*, Nat. Misc. pl. 681.
2. ? A. *pulchra* Gould, Proc. Z. S. 1846. p. .
3. ? A. *diemenensis* Gould, Proc. Z. S. 1846. p. .
4. A. *lepida* (Temm.) Pl. col. 595. f. 1.
5. A. *solitaria* (Temm.) Pl. col. 595. f. 2.
6. A. *pusilla* (Temm.) Gould, Pl. col. 595. f. 3., B. of Austr. pl.

CERYLE *Boie.*†

Bill long, straight, and strong, with the culmen slightly advancing on the forehead and sloping to the tip, which is acute; the sides much compressed; the lateral margins rather dilated at the base, and straight to the tip; the gonys long and ascending. *Tail* long, broad, and rounded. *Tarsi* remarkably short and stout. The remaining characters are very similar to those given with *Alcedo*.

The species of Ceryle inhabit Africa, India, and most parts of the New World. They are always found in the neighbourhood of fresh-water streams, and falling waters, perched solitary on an overhanging branch, watching the approach of fish to the surface of the water, when with a sudden sweep they seize the fish and swallow it in an instant. Their flight is rapid and straight, and the noise emitted by some species is loud, hoarse, and similar to a rattle. The nest is formed at the extremity of a long gallery dug in the clayey or sandy banks, to the depth of several feet, with the end wide enough for both parents to turn in. The eggs are usually five or six in number.

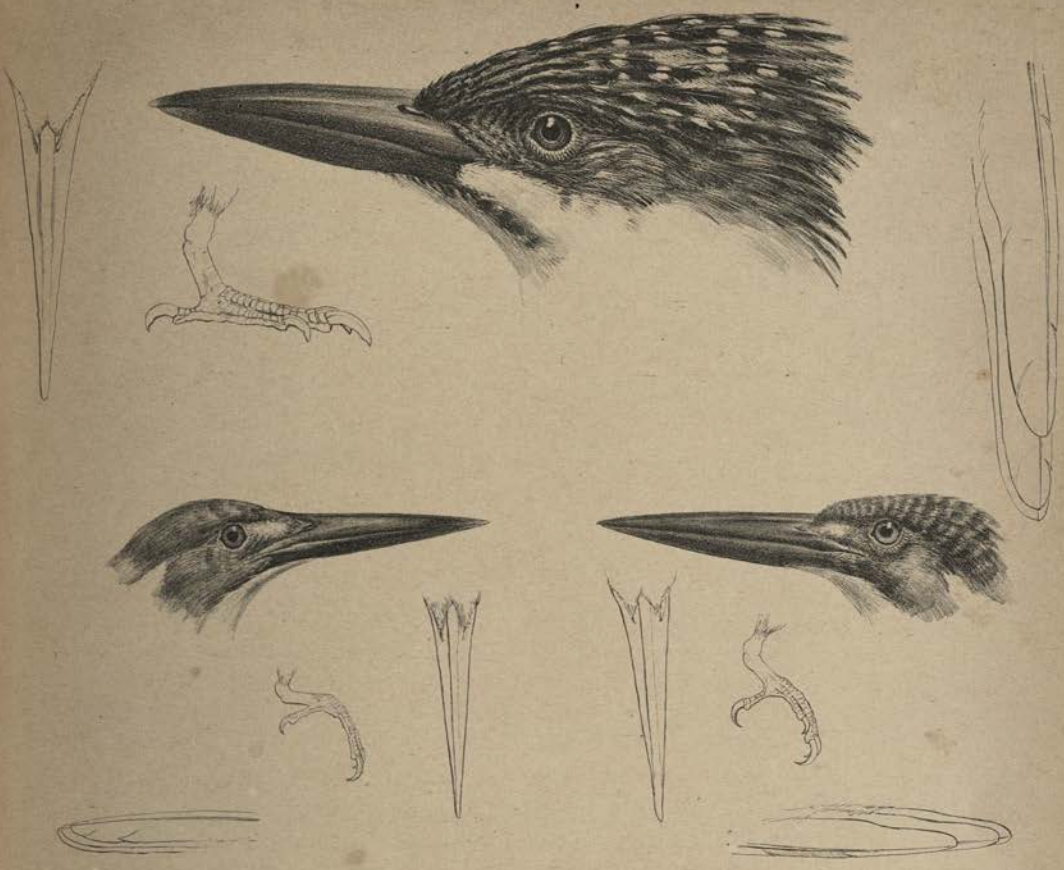
1. C. *rudis* (Linn.) Edwards's Birds, pl. 9. Pl. enl. 62. 716. — Ispida bicincta et I. bitorquata *Swains.*
2. C. *guttata* (Vigors), Gould, Cent. of B. pl. — Alcedo lugubris *Temm.* Pl. col. 548.
3. C. *alcyon* (Linn.) Catesb. Carol. t. 69., Pl. enl. 715., Wils. Amer. Orn. pl. 23. f. 1., Pl. enl. 593.
4. C. *maxima* (Pall.) Swains. B. of W. Afr. pl. 11. — Alcedo guttata *Bodd.* Pl. enl. 679.; Ispida giguntea *Swains.*
5. C. *torquata* (Linn.) Pl. enl. 284. — Alcedo cinerea *Bonn.*; A. cyanea *Vieill.* Azara, No. 417, 418.; A. stellata *Meyen*, Nov. Act. xvi., Suppl. t. 14.
6. C. *viridirufa* (Bodd.) Pl. enl. 592. — Alcedo bicolor *Gmel.*
7. C. *amazona* (Gmel.) — Alcedo rubescens *Vieill.* Azara, No. 419, 420.
8. C. *americana* (Gmel.) Pl. enl. 591. — Alcedo viridis *Vieill.* Azara, No. 421.
9. C. *Cabanisii* Tsch. Faun. Per. p. . — Alcedo americana *Tsch.*
10. ? C. *inda* Linn. Edwards's Birds, pl. 325., Shaw, Nat. Misc. pl. 889.
11. C. *superciliosa* (Linn.) Edwards's Birds, pl. 245., Pl. enl. 756. var. β.
12. C. ?? *leucorhyncha* (Gmel.) Seba, Thes. i. t. 53. f. 3.
13. C. ?? *surinamensis* (Gmel.).
14. C. ?? *brasiliensis* (Gmel.).
15. C. ?? *cayanensis* (Gmel.) — Alcedo taparara *Bonn.*

* Mr. Swainson established this genus in 1837 (*Class. of Birds*, ii. p. 336.).
† M. Boie established this genus in 1828. *Ispida* (1837) of Mr. Swainson is synonymous.

PICORUM TESTIMONIA

Hullmandel & Walton Lithographers

GALBULA
albiventris. Sw.



GALBULINÆ.

CERYLE guttata. 2. ALCYONE azurea. 3. ALCEDO curyzona. 4. JACAMEROPS grandis. 5. GALBULA leptura.

The fourth Subfamily,

GALBULINÆ, or JACAMARS,

have the Bill more or less long, generally straight, and pointed, sometimes rather depressed, broad, and curved; the Wings moderate, with the fourth quill the longest; the Tail more or less long and graduated; the Tarsi very short, and generally clothed with feathers; the Toes four or three, usually placed two before and two behind (except when the inner posterior toe is wanting), the two anterior toes united to near the end of the inner one.

GALBULA *Mœhr.**

Bill more or less lengthened, slender, straight, and four-sided, with the culmen keeled, the sides sloping to the lateral margins, which are straight; the gonys lengthened, keeled, and straight; the base furnished with two long slender bristles; the nostrils basal, lateral, and placed in a small groove, with the opening small and exposed. *Wings* moderate and rounded, with the fourth quill the longest. *Tail* more or less long and graduated. *Tarsi* very short, more or less slender, and covered with feathers. *Toes* unequal; the outer anterior toe longest; the inner posterior toe very small, or entirely wanting.

The species that compose this genus are peculiar to the tropical portions of South America, and are also found in some of the West Indian isles. They inhabit the humid forests, where it is usual to observe them seated singly on some low naked branch, until the approach of an insect calls them into action, after which they dart off rapidly, and securing it with their lengthened acute bill, return to the same place again. The ground round their chosen position is generally strewed with the wings of insects, as they only feed on the bodies. Some species are stated to frequent the borders of rivers and brooks, and to feed on fish and their fry. These birds form a hole in trees or in banks of rivers, like the kingfishers, the entrance of which is an inch and a half in diameter, and the eggs are placed about eight inches from the outward surface. They are usually three in number.

1. G. *viridis* Lath. — Alcedo galbula *Linn.* Edw. Birds, pl. 334. Pl. enl. 238., Levaill. Hist. Nat. Jac. t. 47, 48, 49., Vieill. Ois. dor t. 1, 2.?
2. G. *ruficauda* Cuv. Levaill. Hist. Nat. Jac. t. 50. — Galbula macroura *Vieill.* Gal. des Ois. t. 29.
3. G. *leptura* Swains. Lath. Gen. Syn. pl. 26., Levaill. Hist. Nat. Jac. t. 52. — Galbula viridis var. *Lath.*
4. G. *leucogaster* Vieill. N. Dict. d'Hist. Nat. xvi. p. 441., Levaill. Hist. Nat. Guep. Suppl. t. h. — Galbula albiventer *Less.*
5. G. *albirostris* Lath. Levaill. Hist. Nat. Jac. t. 51. — Galbula flavirostris *Vieill.* Ois. dor t. 4, 5.
6. G. *tombacea* Spix, Av. Bras. t. 58.
7. G. *paradisea* (Linn.) Pl. enl. 271. Levaill. Hist. Nat. Jac. t. 52. Vieill. Ois. dor t. 3.
8. G. *tridactyla* (Vieill.) N. Dict. d'Hist. Nat. xvi. p. 444. t. E. 32. f. 2. Av. Bras. t. 57. f. 2. — Galbula ceycoides *Such.* Jard. & Selby, Ill. Orn. pl. 22.; Jacamaralcyon brasiliensis *Less.* Levaill. Hist. Nat. Guep. Suppl. t. L.; Type of Jacamaralcyon *Cuv.* (1829).
9. G. *lugubris* Swains. Two Cent. and a Quart. p. 329.
10. G. *albogularis* Spix, Av. Bras. t. 57. f. 1.

* Established by Mœhring in 1752. It embraces *Jacamaralcyon* of Cuvier (1829).

JACAMEROPS *Cuv.**

Bill lengthened, curved, broad, and rather depressed at the base, with the culmen curved, and slightly keeled; the sides sloping to the lateral margins, which are curved to the tip; the gonys long, and rather keeled; the nostrils basal, lateral, and placed anteriorly in a small groove, with the opening exposed. *Wings* moderate and rounded, with the fourth quill the longest. *Tail* lengthened, broad, and graduated. *Tarsi* very short, slender, and mostly concealed by feathers. *Toes* unequal, the outer anterior toe longer than the outer posterior one, the inner posterior toe the shortest of all; the claws long, compressed, and acute.

It is in the tropical parts of South America that the species which compose this genus are found. Their habits and manners are unknown, but are supposed to be similar to those of the foregoing genus.

1. J. *grandis* (Gmel.) Levaill. Hist. Nat. Jac. t. 54. Ois. dor. t. 6. — Galbula jacamirici *Shaw.*; Lamprotila platyrhyncha *Swains.*

2. J. *Boersii* (Ranz.) Levaill. Hist. Nat. Jac. t. 53.

* Established by Cuvier in 1817. *Lamprotila* of Mr. Swainson (1837) is synonymous.

June, 1847.

C. Hullmandel's Patent Lithotint.

MELITTOPHAGUS
gularis. (Shaw).

C. Hullmandel's Patent Lithount

1. MEROPS apiaster 2. NYCTIORNIS amictus 3. MELITTOPHAGUS erythropterus

The fourth Family,

MEROPIDÆ, or BEE-EATERS,

have the Bill longer than the head, with both mandibles curved and acutely pointed; the sides compressed, and sloping from the culmen; the Nostrils basal, lateral, rounded, and partly hidden by the short bristles; the Wings more or less long and pointed; the Tail long, broad, and the middle feather sometimes prolonged beyond the lateral ones; the Tarsi very short; the Toes long, with the lateral ones more or less united to the middle toe; the hind toe long, and broadly padded beneath.

The only Subfamily,

MEROPINÆ, or BEE-EATERS,

have the same characters as previously given for the family,

MEROPS *Linn.**

Bill long, curved, and pointed, with the culmen curved, keeled, and the sides much compressed to the tip, which is very acute; the sides sloping from the culmen to the lateral margins for its entire length; the gonys very long and arched; the nostrils basal, lateral, rounded, and covered with a few short hairs. *Wings* reaching two thirds the length of the tail, and pointed, with the first quill spurious, and the second the longest. *Tail* long, broad, more or less even, with the ends of the two middle feathers more or less prolonged beyond the others. *Tarsi* very short, robust, and covered in front with narrow transverse scales. *Toes* long, the lateral ones unequal, the outer the longest, united as far as the second joint, and the inner as far as the first joint, of the middle toe; the hind toe long, strong, and broadly padded beneath; the claws moderate, curved, and acute.

The species that compose this genus are found in most parts of the old continent, migrating from place to place according to the change of season. They seek the warmer portions of the globe during the winter, and in summer the temperate localities, as their food entirely consists of insects. They usually perch themselves singly or in small parties on some prominent branch, or on any object from which they can see around them. When an insect is observed to approach, they fly and capture it while on the wing, and then generally return to the same perch that they have just

* Established by Linnæus in 1756 (*Systema Naturæ*). Brisson in 1760 used the name of *Apiaster* for these birds.

left, where they again seat themselves to wait the appearance of another insect. During the morning and in the evening they are sometimes noticed to congregate in company, hawking actively about, and apparently catching insects in the manner of swallows. Their flight is graceful, and is capable of being sustained for a lengthened migration. Their cry is loud, and consists of pleasant whistling notes, which are continually repeated during the morning and evening flight. The young are reared in horizontal holes, formed in the sandy banks of rivers, or in rocks which are sufficiently soft for them to excavate. The entrance is small, reaching inwardly to the depth of a yard or more, and having at the end of the tube a receptacle of such dimensions that the parent bird can easily turn within it. The eggs are four or five in number, and are deposited on the bare sand, or on moss and other soft materials.

1. M. *apiaster* Linn. Pl. enl. 938. — Merops chrysocephalus *Gmel.*; M. Schœghagha *Forsk.* Le Vaill. Hist. Guêp. t. 1, 2., Gould, B. of Eur. pl. 59., Hist. d'Egypt, Ois. t. 4. f. 3.

2. M. *persicus* Pall. Zoogr. i. p. 440.

3. M. *ægyptius* Forsk. Faun. Arab. p. 1., Kittl. Kupf. der Vög. t. 7. f. 1. — Merops viridissimus *Swains.* Le Vaill. Guêp. t. 10.; M. Lamarkii *Vieill.*

4. M. *albicollis* Vieill. N. Dict. d'Hist. Nat. xiv. p. 15., Le Vaill. Guêp. t. 9. — Merops Cuvieri *Licht.*

5. M. *supercilliosus* Linn. Pl. enl. 259. — Merops ruficapillus *Vieill.* Le Vaill. Guêp. t. 19.

6. M. *Savignii* Cuv. Le Vaill. Guêp. t. 6. 6.* — Merops ruficollis *Vieill.* Le Vaill. Guêp. t. 16., Swains. B. of W. Afr. pl. 7., Zool. Illustr. pl. 76.

7. M. *javanicus* Horsf. Linn. Trans. xiii. p. 171.— Merops Savignii *Temm.*

8. M. *ornatus* Lath. Lewin, N. Holl. Birds, pl. 18., Gould, B. of Austr. pl., Le Vaill. Guêp. t. 4.

9. M. *philippinus* Linn. Pl. enl. 57., Le Vaill. Guêp. t. 14. — Merops Daudini *Cuv.*

10. M. *viridis* Linn. Pl. enl. 740.

11. M. *quinticolor* Vieill. N. Dict. d'Hist. Nat. xiv. p. 20., Le Vaill. Guêp. t. 15. — Merops urica *Horsf.* Swains. Zool. Illustr. pl. 8.

12. M. *erythrocephalus* Gmel. Nat. Misc. pl. 357.

13. M. *sumatranus* Raffl. Linn. Trans. xiii. p. 294.

14. M. *badius* Gmel. Pl. enl. 252. — Merops castaneus *Lath.* Le Vaill. Guêp. t. 12, 13.; M. senegalensis *Shaw.*

15. M. *nubicus* Gmel. Pl. enl. 649. — Merops cæruleocephalus *Lath.*; M. superbus *Penn.* Shaw, Nat. Misc. pl. 78. & 613., Swains. B. of W. Afr. pl. 9., Le Vaill. Guêp. t. 3.

16. M. *hirundinaceus* Vieill. N. Dict. d'Hist. Nat. xiv. p. 21., Le Vaill. Guêp. t. 8., Swains. B. of W. Afr. pl. 10. — Merops taiva *Cuv.*; M. chrysolaimus *Jard. & Selby,* Ornith. Illustr. pl. 99.

17. M. *angolensis* Gmel. Briss. Orn. iv. t. 44. f. 1. A.

18. M. *Leschenaultii* Vieill. N. Dict. d'Hist. Nat. xiv. p. 18., Le Vaill. Guêp. t. 18.

19. M. *collaris* Vieill. N. Dict. d'Hist. Nat. xiv. p. 16., Kittl. Kupf. der Vög. t. 7. f. 2.

20. M. *longicauda* Vieill. Dict. d'Hist. Nat. xiv. p. 15.

21. ? M. *bicolor* Daud. Ann. du Mus. ii. t. 62. f. 1. — Merops malembicus *Shaw,* Nat. Misc. pl. 71., Le Vaill. Guêp. t. 5., Vieill. Gal. des Ois. t. 186.

22. ? M. *citrinella* Vieill. N. Dict. d'Hist. Nat. xiv. p. 24., Le Vaill. Guêp. t. 11. (a variety).

23. ? M. *coromandus* Lath. Sonn. Voy. Ind. t. 119. — M. flavicans *Gmel.*? (a variety).

24. M. *orientalis* Lath.

25. M. *cærulescens* Lath.

26. M. *Lafresnayii* Guer. Rev. Zool. 1843. p. 322.

Melittophagus *Boie.**

Differs from the former genus by having the *Wings* reaching to the middle of the tail, and rounded, with the first quill more than half the length of the third, which is rather longer than the second, and the longest of all. *Tail* long, broad, and even.

The species of this division are peculiar to the continent of Africa. Their habits and manners are similar to those of the last genus.

1. M. *erythropterus* (Gmel.) Boie.— Merops minutus *Vieill.*; M. minulus *Cuv.* Le Vaill. Hist. de Guêp. t. 17.

2. M. *variegatus* (Vieill.) N. Dict. d'Hist. Nat. xiv. p. 25., Kittl. Kupf. der Vög. t. 7. f. 3.

3. M. ——— ? Le Vaill. Hist. de Guêp. t. 7.

4. M. *Bullockii* (Vieill.) Nouv. Dict. de Hist. Nat. xiv. 13., Le Vaill. Hist. de Guêp. t. 20., Donov. Nat. Rep. t. 45. — Merops cyanogaster *Swains.* B. of W. Afr. pl. 8.

5. M. *Bullockoides* (A. Smith), S. Afr. Quart. Journ. 1834., Ill. S. Afr. Zool. Birds, pl. 9.

6. M. *gularis* (Shaw), Nat. Miscell. pl. 337.

* M. Boie established this genus in 1828 (*Isis*).

Nyctiornis *Swains.**

Bill long, curved, and pointed, with the culmen curved, rather flattened, and grooved along the middle for some distance from the base; the sides sloping and compressed to the tip, which is acute; the gonys moderate and arched; the nostrils basal, lateral, rounded, and covered with short plumes. *Wings* reaching beyond the base of the tail, and rounded, with the first quill half the length of the fourth, the second and third graduated, and the fourth the longest. *Tail* long, broad, and slightly emarginated. *Tarsi* very short, robust, and covered in front with narrow transverse scales. *Toes* long, the lateral ones unequal, the outer one the longest, and united to the second joint, and the inner to the first joint, of the middle toe: the hind toe long, strong, and padded beneath; the claws moderate, curved, and acute.

It is in the islands of the Indian Archipelago, and also on the continent of India, that the species of this genus are found. They inhabit the dense jungles, and are generally seen singly or in pairs, perched on the top branches of the lofty trees, where they remain quietly seated watching the casual approach of an insect, which they pursue and capture, and then usually return to the same perch to await the appearance of others.

1. N. *amicta* (Temm.) Swains. Pl. col. 310., Swains. Zool Illustr. n. s. pl. 56.
2. N. *Athertoni* (Jard. & Selby), Illustr. Ornith. pl. 58. — Nyctiornis cæruleus *Swains.*; N. Amherstianus *Royle,* Ill. Him. Bot.; Bucia nipalensis *Hodgs.*; Alcemerops paleazureus *Less.*; Merops? cyanogularis *Jerd.*; M. assamensis *M'Clell.*

* Mr. Swainson established this genus in 1831 (*Zoological Illustrations,* new series). It is synonymous with *Alcemerops* of M. I. Geoffroy (1832), and *Bucia* of Mr. Hodgson (1836). This name he changed to *Napophila* (1841).

July, 1846.

Hullmandel & Walton Lithographers

IRRISOR
melanorhynchus.(Licht)

Order II. PASSERES.

The second Tribe,

TENUIROSTRES,

have the Bill of various lengths and forms, always slender, and with the tip of the upper mandible entire and usually acute; the Tarsi short; the Toes generally long, especially the hind toe, which is strong and armed with a more prominent claw.

The first Family,

UPUPIDÆ, or Hoopoes,

have the Bill lengthened, slender, curved or straight for its entire length; the sides compressed to the tip, which is entire and acute; the Nostrils basal, and rather small: the Wings long and rounded: the Tail more or less long and rounded, or even: the Tarsi strong and usually short: the Toes long and strong; the outer toe more or less united at its base, the hind toe long; the Claws strong, long, and curved.

The first Subfamily,

UPUPINÆ, or Hoopoes,

have the Bill long, curved or straight from the base; the culmen keeled, and the sides generally compressed suddenly at the base towards the tip, which is entire and acute; the Nostrils basal, small, and mostly covered by a membranous scale: the Wings long and rounded: the Tail more or less long, graduated or even: the Tarsi generally short and strong: the Toes long; the outer toe united at its base, the hind toe long and strong; the Claws long, strong, curved, and acute.

Upupa *Linn.**

Bill very long, slender, slightly curved from the base to the tip, which is entire and acute; the culmen keeled, the sides compressed from the base, and the gonys lengthened and curved; the nostrils basal,

* Linnæus established this genus in 1735. It probably embraces *Fregilupus* of M. Lesson (1831).

small, with the opening covered by a membranous scale. *Wings* long and rounded, with the fourth and fifth quills equal and longest. *Tail* long, broad, and even. *Tarsi* shorter than the middle toe, strong, and covered with broad scales. *Toes* moderate; the outer toe longer than the inner and united at the base to the first joint, the hind toe long; the claws moderate, compressed, curved, and that of the hind toe long and nearly straight.

The species that compose this genus are found in Europe, Asia, and Africa. They are migratory, and prefer low and moist situations that border woods and forests; it is in such places that they search for insects and worms. They also seek for their food on the trunks of trees, and especially among the foliage for caterpillars, and they may sometimes be observed hanging from a branch while reaching one of them from a leaf. Even manure is examined by these birds for the insects that it contains. The nest is generally placed in holes of decayed trees and occasionally in crevices of walls and rocks. The materials employed consists of dry grass, and the nest is usually lined with feathers or other soft articles internally. The female deposits four or five eggs.

1. U. *Epops* Linn. Pl. enl. 52., Edwards's Birds, pl. 345., Gould, B. of Eur. pl. 238., Leveaill. Prom. t. 22. — Upupa vulgaris *Pall.*; U. senegalensis *Swains.* ?

2. U. *minor* Gmel. Vieill. Ois. dor. t. 2. — Upupa cristatella *Vieill.* Gal. des Ois. t. 184.; U. africana *Bechst.*; U. capensis *Swains.*

3. U. *monolophos* Wagl. Syst. Av., Levaill. Prom. t. 9.

4. U. *varia* Bodd. Pl. enl. 697. — Upupa capensis *Gmel.*; U. madagascariensis *Shaw*; Coracia cristata *Vieill.* Levaill. Prom. t. 18. Vieill. Ois. dor. t. 3.; Type of Fregilupus *Less.* (1831).

Irrisor *Less.**

Bill long, more or less curved throughout its length, the culmen keeled, and the sides suddenly compressed from the base towards the tip, which is entire and acute; the gonys lengthened and curved; the nostrils basal and small, with the opening oval and covered by a membranous scale. *Wings* long and rounded, with the fourth and fifth quills equal and longest. *Tail* more or less lengthened, broad, and graduated. *Tarsi* much shorter than the middle toe, strong, and covered with broad scales. *Toes* long and strong; the outer toe longer than the inner, and united at the base beyond the first joint; the hind toe very long; the claws long, strong, compressed, and much curved.

The species of this genus are found throughout the entire continent of Africa. They frequent the tall trees, creeping among the branches while in search of their food, which consists almost entirely of insects and their larvæ; they also feed on the fruits of the fig trees when ripe; and should they, while thus engaged, be disturbed, they commence uttering a loud chattering noise. It is further stated that they congregate in small flocks, and roost in the holes of trees.

1. I. *erythrorhynchos* (Lath.) Lath. Gen. Syn. Supp. pl. 110., Nat. Misc. pl. 533., Vieill. Ois. dor. t. 6., Levaill. Prom. t. 1, 2, 3. — Upupa viridis *Licht.*; Irrisor capensis *Less.*

2. I. *melanorhynchos* (Licht.) Levaill. Prom. t. 4. — Falcinellus senegalensis *Vieill.*

3. I. *caudacutus* (Vieill.) Levaill. Prom. t. 8, 9. et 17. — Epimachus obscurus *Wagl.*

4. I. *indicus* (Lath.) Vieill. Ois. dor. t. 9., Levaill. Prom. t. 7. — Promerops cæruleus *Shaw*, Nat. Misc. pl. 985.

5. I. *unicolor* (Licht.) Isis, 1829. p. 656.

6. I. *lamprolophos* (Wagl.) Levaill. Prom. t. 11, 12.

7. I. *sibilator* (Vieill.) Levaill. Prom. t. 10. — Epimachus sibilatrix *Wagl.*

8. I. *aterrimus* (Steph.) — Promerops pusillus *Swains.* B. of W. Afr. p. 120.

9. I. *cyanomelas* (Vieill.) Levaill. Prom. t. 5, 6. — Upupa purpurascens *Burch.*; Rhinopomastes Smithii *Jard.* Zool. Journ. iv. pl. 1.; R. Levaillantii *Less.*; Type of Rhinopomastes *Smith*, (1828.).

10. I. *minor* Rüpp. Syst. Uebers. Vog. t. 8.

* M. Lesson established this division in 1831 (*Traité d'Ornithologie*, p. 239.). It embraces *Rhinopomastes* of Dr. Smith (1828).

Falculia *I. Geoffr.**

Bill lengthened, strong, curved from the base to the tip, which is entire; the sides suddenly compressed from the base, and the gonys lengthened and curved; the nostrils basal, with the opening large, rounded, and exposed. *Wings* long and rounded, with the fourth and fifth quills the longest. *Tail* long, broad, and even. *Tarsi* shorter than the middle toe, strong, and covered with broad scales. *Toes* long and strong; the outer toe longer than the inner, and united at the base beyond the first joint; the hind toe very long and strong; the claws long, strong, compressed, and curved.

The type of this genus is found in Madagascar, where it is usually seen on the margins of rivers, searching for the larvæ of aquatic insects, which constitute its chief food.

F. *palliata* I. Geoffr. Mag. de Zool. 1836. Ois. t. 49.

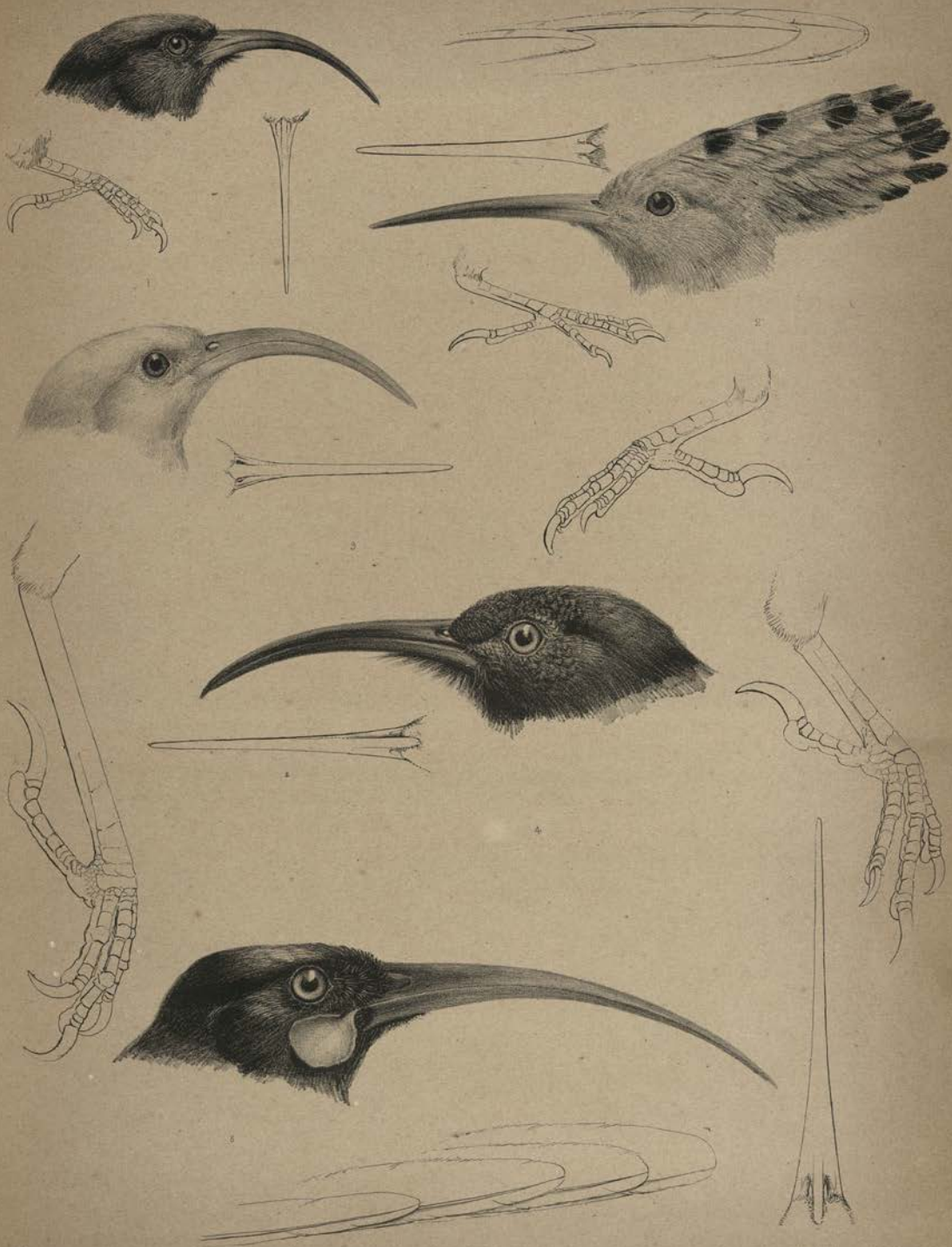
* M. Isidore Geoffroy established this genus in 1836.

July, 1847.

MUSEUM TESTIMONIAL

Printed by Hullmandel & Walton

EPIMACHUS
paradiseus (Swains.)



1. IRRISOR cyanomelas. 2. UPUPA epops. 3. FALCULEA palliata. 4. EPEMACHUS speciosus. 5. NEOMORPHA Gouldii.

The second Subfamily,

EPIMACHINÆ, or PLUMED BIRDS.

have the Bill more or less lengthened, slender, and arched to the tips, which are acute; the Nostrils lateral and placed in a broad basal groove, which is mostly concealed by the projecting plumes of the forehead, leaving the opening small and exposed: the Wings moderate and rounded: the Tail of various lengths, sometimes even or graduated at its end: the Tarsi more or less long, robust, and usually covered with broad scales in front: the Toes long and strong, with the outer toe united at its base; the hind toe very long, strong, and armed with a powerful claw.

NEOMORPHA *Gould.**

Bill more or less long, arched, and acutely pointed, with the culmen, lateral margins, and gonys curved to the tips; the sides compressed; the nostrils basal, lateral, and placed in a short, broad, membranous groove, which is mostly covered by the projecting plumes, leaving the opening small and exposed. *Wings* long and rounded; with the fifth, sixth, and seventh quills nearly equal and longest. *Tail* rather long, broad, and somewhat rounded. *Tarsi* much longer than the middle toe, robust, and covered in front with slightly divided broad scales. *Toes* long and robust, with the inner toe shorter than the outer and free at the base; the outer united at its base; the hind toe two thirds the length of the tarsus, and armed with a very long, strong, curved, acute claw; those of the fore toes long, curved, and acute.

The typical species of this division is an inhabitant of New Zealand, especially on the Torirua range of mountains. It is usually observed perched on the lower branches of the trees, quickly moving from branch to branch, and at the same time spreading out its tail, and throwing up the wings in a grotesque manner. The food of this bird consists of seeds, and various kinds of insects.

N. *Gouldii* G. R. Gray, List of Gen. of Birds, p. 15. — Neomorpha acutirostris et N. crassirostris *Gould*, Proc. Z. S. 1835. p. 144., B. of Austr. pl.; O. Des Murs, Iconogr. Ornith. pt. i. t. 2.

* Established by Mr. Gould in 1836 (*Proc. Zool. Soc.* 1836, p. 144.).

Epimachus *Cuv.**

Bill long, arched, and rather slender, with the culmen, lateral margins, and gonys curved to the tips, that of the upper mandible sometimes slightly emarginated; the nostrils basal, lateral, and placed in a broad membranous groove, which is hidden by the projecting feathers, leaving the opening partly exposed. *Wings* moderate, with the fourth (to the seventh ?) quills equal and longest; some of the quills sometimes truncated at the ends. *Tail* more or less lengthened, with the end graduated and even. *Tarsi* as long as, or shorter than, the middle toe, and strongly scutellated in front. *Toes* long and strong, with the inner toe the shorter, the outer united at its base; the hind toe equal in length to the tarsus, robust, and armed with a robust compressed claw. The sides of the body ornamented with more or less prolonged and decomposed feathers.

Most of the species of this genus are found in New Guinea, but one inhabits Australia. The habits and manners of those of the former country remain unrecorded by naturalists; but that of the last continent has been noticed as ascending the upright boles of trees, precisely after the manner of creeping birds; and, like them, its powers of flight are very limited, being seldom exerted except to transport itself from tree to tree, or from one portion of the forest to another.

1. E. *speciosus* (Bodd.) Pl. enl. 639. — Upupa magna *Gmel.*; U. superba *Lath.*; U. striata *Bodd.* Pl. enl. 638.; Merops fusca *Gmel.*; U. papuensis *Lath.* Sonn. Voy. t. 101. 100., Levaill. Prom. t. 8. 13, 14, 15., Vieill. Ois. dor. t. 7.; Cinnamolegus papuensis *Less.* Hist. Nat. des Parad. t. 39, 40.

2. E. *albus* (Blum.) Levaill. Prom. t. 16, 17. — Paradisea nigricans *Shaw*; P. candida *Forst.*; Falcinellus resplendens *Vieill.*; Seleucides acanthylis *Less.* Hist. Nat. des Parad. t. 36, 37, 38., Vieill. Gal. des Ois. t. 185.; Type of Seleucides *Less.* (1835).

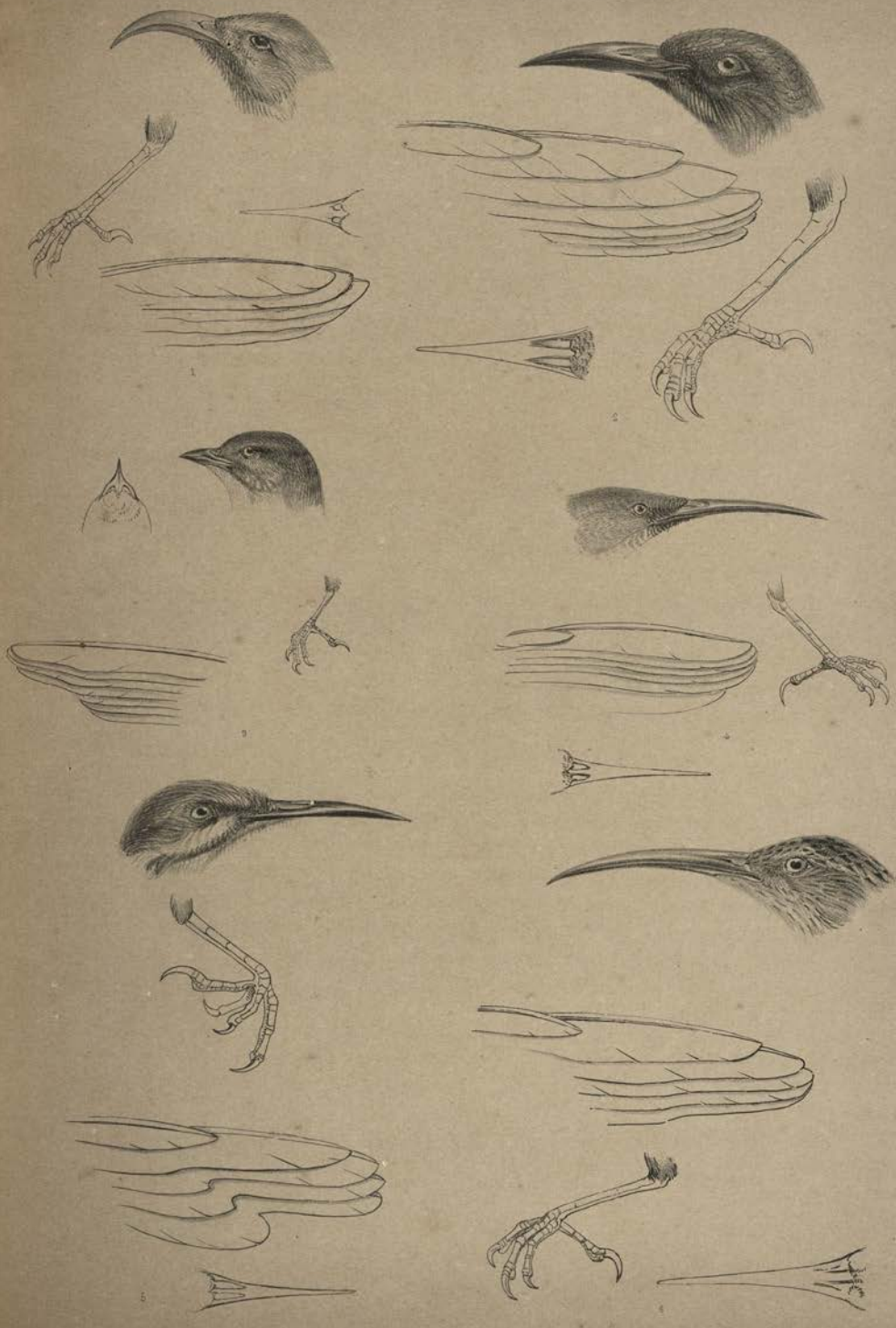
3. E. *magnificus* Vieill. N. Dict. d'Hist. Nat. xxviii. p. 167., Cuv. Règ. An. Ois. t. 4. f. 2., Levaill. Prom. t. 16., Less. Cent. Zool. t. 4, 5., Less. Tr. d'Orn. t. 74. f. 1., Hist. Nat. des Parad. t. 32, 33, 34.; Type of Craspedophora *G. R. Gray* (1840).

4. E. *paradiseus* (Swains.) Zool. Journ. (1825) p. 481. — Epimachus regius *Less. & Garn.* Voy. de la Coqu. Ois. t. 28.; Epimachus Brisbani *Wils.* Ill. Zool. pl. ix., Less. Cent. Zool. t. 3., Hist. Nat. des Parad. t. 29, 30.; Type of Ptiloris *Swains.* (1825).

* Established by Cuvier in 1817 (*Règ. Anim.* 1817, p. .). *Cinnamolegus* of M. Lesson (1835) is synonymous. It embraces *Seleucides* of M. Lesson (1835) (with which *Nematophora* of G. R. Gray (1840) is synonymous), *Craspedophora* of G. R. Gray (1840), and *Ptiloris* of Mr. Swainson (1825).

Hullmandel & Walton Lithographers.

ARACHNOTHERA
urepygialis G R Gray.



Schmandel & Walton Lithographers

1. DREPANIS coccinea. 2. MOHO pacifica. 3. DICÆUM hirundinaceum.
4. NECTARINIA famosa. 5. PROMEROPS caffra. 6. ARACHNOTHERA magna.

The second Family,

PROMEROPIDÆ, or SUN-BIRDS,

have the Bill more or less lengthened, slender, and usually curved throughout its length; the Nostrils basal, and covered by a scale; the Wings moderate; the Tail of various lengths, even or graduated; the Tarsi moderate, and covered with broad scales; the Toes moderate, and armed with curved and acute claws.

The first Subfamily,

PROMEROPINÆ, or SUN-BIRDS,

have the Bill more or less long, slender, curved, with the sides compressed to the tip, which is acute, and the lateral margin sometimes finely serrated; the Nostrils basal, and the opening closed by a membranous scale; the Wings moderate; the Tail more or less long, with the middle feathers sometimes prolonged beyond the others; the Tarsi usually short; the Toes moderate; the outer toe rather longer than the inner, and united at its base; the Claws moderate, curved, and acute.

DREPANIS *Temm.**

Bill more or less long and curved, with the base broad, and the sides compressed to the tip, which is acute; the gonys long and curved; the nostrils basal and lateral, with the opening small, and covered by a membranous scale. *Wings* moderate; the first quill wanting, the second nearly as long as the third and fourth, which are equal and longest. *Tail* moderate and even. *Tarsi* longer than the middle toe, and covered with broad scales. *Toes* moderate; the outer toe rather longer than the inner, and united at the base; the hind toe long and strong; the claws rather short, compressed, and acute.

These species inhabit the Sandwich Islands; they are gregarious, and are usually seen thrusting their bills and tongues into various flowers to obtain the nectar and insects that conceal themselves in them. The natives catch most of the species by snares for the sake of their feathers, with which they make their feathered dresses, helmets, and other articles.

* M. Temminck established this genus in 1820. *Vestiaria* of Dr. Fleming (1820) is synonymous. It embraces *Hemignathus* of M. Lichtenstein (1838).

1. D. *pacifica* (Gmel.) Ellis, Icon. ined. 27., Vieill. Ois. dor. t. 63., Levaill. Hist. de la Guep. t. 19. — Vestiaria hoho *Less.*

2. D. *coccinea* (Gmel.) Ellis, Icon. ined. 29., Merr. Ic. Av. p. 14. t. 4., Vieill. Ois. dor. t. 52., Shaw, Nat. Misc. pl. 75. — Certhia vestiaria *Lath.*; Vestiaria evi *Less.*; C. obscura *Gmel.* Ellis, Icon. ined. 28., Lath. Gen. Syn. pl. 33. f. 1., Vieill. Ois. dor. t. 53.; Vestiaria akaroa *Less.*

3. ? D. *falcata* (Gmel.).

4. D. *sanguinea* Gmel. Vieill. Ois. dor. t. 66. — Nectarinia Byronensis *Blox.* Byron, Voy. p. 249., Griff. An. Kingd. pl. 11. p. 390.; Certhia virens *Gmel.* Vieill. Ois. dor. t. 67. & 68.; Nectarinia flava *Blox.*; Phyllornis tonganensis *Less.*

5. D. *rufa* (Blox.) Byron, Voy. p. 250. Voy. of Sulphur Birds, pl.

6. D. *lucida* (Licht.) — Heterorhynchus olivaceus *Lafr.* Mag. de Zool. 1839. Ois. t. 10.; Vestiaria heterorhynchus *Less.*; Type of Hemignathus *Licht.* (1838).

7. D. *olivacea* (Licht.) Voy. de la Venus, Ois. t. 1.

Moho *Less.**

Bill rather long, curved, rather depressed and broad at the base; the sides compressed to the tip, which is acute; the gonys long, and slightly curved: the nostrils lateral, basal, and placed in a large groove, with the opening covered by a membranous scale. *Wings* moderate and rounded, with the fourth and fifth quills equal and longest. *Tail* lengthened and graduated. *Tarsi* longer than the middle toe, strong, and covered with broad scales. *Toes* moderate, strong; the outer toe rather longer than the inner, and united at the base; the hind toe long and very strong; the claws moderate, compressed, and curved.

The species that composes this division is found on the islands of the South Sea.

M. *niger* (Gmel.) Ellis, Icon. ined. 26., Pl. col. 471. — Merops fasciculatus *Lath.*; Gracula nobilis *Merr.* Ic. Av. p. 7. t. 2., Dixon's Voy. p. 371. pl. 19.

Promerops *Briss.*†

Bill lengthened, slender, rather curved, with the base broad, and the sides compressed to the tip, which is acute and emarginated; the gonys lengthened, and slightly curved; the nostrils lateral, basal, placed in a lengthened groove, with the opening linear, and closed by a membranous scale. *Wings* moderate and rounded, with the fourth quill the longest; the inner webs of the second, third, fourth, and fifth, are broad and emarginated near the middle, especially the latter one. *Tail* lengthened, graduated, and composed of narrowed feathers, the two middle much longer than the others. *Tarsi* as long as the middle toe, strong, and covered with broad scales. *Toes* moderate; the outer toe longer than the inner, and united at its base; the hind toe long and strong; the claws moderate, curved, and compressed.

It is in Africa, especially at the Cape of Good Hope, that the species forming this genus is found. They are generally observed fluttering near the flowers of certain plants, thrusting their bill into them and thus obtaining the

* M. Lesson established this division in 1831.

† It was in 1760 that Brisson established this genus. *Falcinellus* of Vieillot (1816), and *Ptiloturus* of Mr. Swainson (1837), are coequal with the name employed.

nectar and the minute insects that feed on it. The nest is placed in thickets, of a hemispherical form, and is composed of moss and lichen, lined with wool.

P. *cafer* (Linn.) Strickl. Pl. enl. 637., Levaill. Ois. d'Afr. t. 287. 288. — Upupa promerops *Linn.* Vieill. Ois. dor. t. 4.

Nectarinia *Ill.**

Bill more or less long, curved, and acute; the base broad and rather depressed, with the culmen rounded and keeled between the nostrils; the gonys lengthened and curved, and the lateral margins finely serrated: the nostrils basal, lateral, and placed in a short broad groove, with the opening concealed by a membranous scale. *Wings* moderate and rounded, with the third and fourth quills, or the fourth only, the longest. *Tail* moderate, broad, and slightly rounded, with the two middle feathers lengthened and narrowed. *Tarsi* as long as the middle toe, and covered in front with very broad scales. *Toes* moderate; the outer toe rather longer than the inner; the hind toe long and strong; the claws moderate, compressed, and curved.

These showy birds are found throughout the continent of Africa as well as in India and its archipelago. It is on the upper smaller branches of trees and bushes, that they are seen in pairs or in small parties hopping about with a quick motion and at the same time continually moving their wings in a tremulous manner, while searching the flowers to obtain the nectar and the minute insects which are found in them. They are occasionally observed hovering on the wing before flowers, while engaged in the same occupation. Spiders also form a portion of their subsistence; these the bird drags from their hiding-places and from their webs, while fluttering in the air, and it will also occasionally snap at an insect while it is flying. The notes seem to vary with the species; but they are usually weak, though pleasing. The nest is usually suspended, and of a hemispherical form, having generally an opening on one side nearer the bottom than the top, with a small roof over it. It is composed of dry fibres mixed with moss and down within. The exterior portion of the nest is sometimes kept together by means of a thick spider's web, which the bird uses in the first instance as a framework to attach the various materials on. The eggs are generally two in number.

1. N. *afra* (Linn.) Edw. Birds, pl. 347. — Cinnyris smaragdinis *Vieill.* Levaill. Ois. d'Afr. t. 300.; Certhia erythrogastra *Shaw*, Nat. Misc. pl. 837., Vieill. Ois. dor. t. 10.; Cinnyris pectoralis *Vieill.* Jard. Sun-Birds, pl. 2. (Nat. Libr.).

2. N. *chalybea* (Linn.) Pl. enl. 246. f. 2., Swains. Ill. Zool. pl. 95., Shaw, Nat. Misc. pl. 381., Vieill. Ois. dor. t. 80., Jard. Sun-Birds, pl. 1. — Certhia capensis *Linn.* ? Vieill. Ois. dor. t. 14. ?

3. N. *chloropygia* Jard. Ann. of Nat. Hist. x. p. 188., Ill. of Orn. n. s. pl. 50., Sun-Birds, pl. 3.

4. N. *bifasciata* (Shaw), Gen. Zool. viii. p. 198., Vieill. Ois. dor. t. 24. — Cinnyris nitens *Vieill.* Jard. Sun-Birds, pl. 4.

5. N. *superba* (Vieill.) Ois. dor. t. 22.

6. N. *splendida* (Shaw), Gen. Zool. viii. p. 191. pl. 26., Levaill. Ois. d'Afr. t. 295. f. 1. — Cinnyris lucidus *Less.* Vieill. Ois. dor. t. 82.; Cinnyris bombycinus *Vieill.* Jard. Sun-Birds, pl. 5.

7. N. *collaris* (Vieill.) N. Dict. d'Hist. Nat. xxxi. p. 502., Levaill. Ois. d'Afr. t. 299., Jard. Sun-Birds, pl. 6.

8. N. *pusilla* (Vieill.) Levaill. Ois. d'Afr. t. 298.

9. N. *venusta* (Shaw), Nat. Misc. pl. 369., Vieill. Ois. dor. t. 79. — Cinnyris pusilla *Swains.* Jard. Sun-Birds, pl. 7.; Nectarinia parvula *Jard.*

10. N. *fusca* (Vieill.) Levaill. Ois. d'Afr. t. 296.

11. N. *Verroxii* (Smith) S. Afr. Quart. Journ. v. p. 13., Ill. Zool. S. Afr. Birds, pl. 57., Jard. Sun-Birds, pl. 9.

12. N. *obscura* Jard. Ill. Orn. n. s. pl. 51.

13. N. *olivacea* (Smith), Ill. Zool. S. Afr. p.

14. N. *cuprea* (Shaw), Gen. Zool. viii. p. 201., Vieill. Ois. dor. t. 23. — Cinnyris tricolor *Vieill.*; C. erythronotus *Swains.* B. of W. Afr. ii. pl. 15.; Certhia rubrofusca *Shaw* ? Vieill. Ois. dor. t. 27. ?; Cinnyris nibarus *Vieill.* ?

15. N. *cyanocephala* (Shaw), Gen. Zool. viii. p. 203.; Vieill. Ois. dor. t. 7. 25. — Cinnyris chloronotus *Swains.* B. of W. Afr. pl. 16., Jard. Sun-Birds, pl. 10.

16. N. *senegalensis* (Linn.) Briss. Orn. iii. t. 34. f. 2. — Cinnyris discolor *Vieill.* Vieill. Ois. dor. t. 8, 9., Levaill. Ois. d'Afr. t. 295. f. 2., Kittl. Kupf. t. 28. f. 2.

* Illiger established this genus in 1811. It embraces *Anthreptes* of Mr. Swainson (1831).

17. N. *natalensis* Jard. Sun-Birds, pl. 12.

18. N. *cruentata* Rüpp. Syst. Uebers. &c. t. 9. — Nectarinia proteus *Rüpp.*

19. N. *amethystina* (Shaw) Gen. Zool. viii. p. 195. Vieill. Ois. dor. t. 5, 6., Levaill. Ois. d'Afr. t. 294. — Cinnyris auratifrons *Vieill.* Jard. Sun-Birds, pl. 13.; Nectarinia aurifrons *Licht.*? ; Certhia aurifrontalis *Bechst.*?

20. N. *fuliginosa* (Shaw) Gen. Zool. viii. p. 223. Vieill. Ois. dor. t. 20. Jard. Sun-Birds, pl. 14. — Certhia maculata *Shaw*, Vieill. Ois. dor. t. 21.

21. N. *Stangeri* Jard. Ann. of Nat. Hist. x. p. 187., Ill. Orn. n. s. pl. 48., Sun-Birds, pl. 15.

22. N. *rubescens* (Vieill.) Encyc. Méth. p. 593.

23. N. *Adelberti* (Gerv.) Mag. de Zool. 1833. Ois. t. 2., Jard. & Selby, Ill. of Orn. n. s. pl. 49., Jard. Sun-Birds, pl. 30.

24. N. *violacea* (Linn.) Pl. enl. 670. f. 2., Levaill. Ois. d'Afr. t. 292., Vieill. Ois. dor. t. 39. — Certhia crocata *Shaw*, Nat. Misc. pl. 210., Jard. Sun-Birds, pl. 16.

25. N. *famosa* (Linn.) Pl. enl. 83. f. 1., Vieill. Ois. dor. t. 37, 38. Levaill. Ois. d'Afr. t. 289, 290., Shaw, Nat. Misc. pl. 19.

26. N. *pulchella* (Linn.) Pl. enl. 670. f. 1., Vieill. Ois. dor. t. 41. Levaill. Ois d'Afr. t. 293. f. 1. — Cinnyris caudatus *Vieill.* Swains. B. of W. Afr. pl. 14., Vieill. Ois. dor. t. 40., Jard. Sun-Birds, pl. 18.

27. N. *cardinalis* (Vieill.) Levaill. Ois. d'Afr. t. 291.

28. N. *platura* (Vieill.) Levaill. Ois. d'Afr. t. 293. f. 2. — Nectarinia sylviella *Temm.* Pl. col. 347. (note), Jard. Sun-Birds, pl. 19.

29. N. *metallica* Licht. Rüpp. Atlas, t. 7., Hemp. & Ehrenb. Symb. Phys. t. 1., Temm. Pl. col. 347. f. 1, 2.

30. N. *affinis* (Rüpp.) Faun. Abyss. t. 31. f. 1.

31. N. *ænea* (Vieill.) Encyc. Méth. p. 599., Levaill. Ois. d'Afr. t. 297,

32. N. *gularis* (Rüpp.) Faun. Abyss. t. 31. f. 2.

33. N. *tacazze* (Stanl.) Rüpp. Faun. Abyss. t. 31. f. 3.

34. N. *abyssinica* Hemp. & Ehrenb. Symb. Phys. Av. t. 4.

35. N. *rectirostris* (Shaw), Vieill. Ois. dor. t. 75. — Cinnyris elegans *Vieill.* Gal. des Ois. t. 178.

36. N. *purpurata* Ill. Kittl. Kupf. Nat. Vög. t. 28. f. 1.

37. N. *soui-manga* (Gmel.) Briss. Orn. t. 32. f. 2, 3., Vieill. Ois. dor. t. 18, 19. — Certhia madagascariensis *Lath.*

38. N. *virescens* (Vieill.) N. Dict. d'Hist. Nat. xiii. p. 497., Vieill. Ois. dor. t. 34.

39. N. *melanura* (Sparm.) Mus. Carls. t. 5.

40. N. *splendens* (Vieill.) Ency. Méth. p. 587., Vieill. Ois. dor. t. 2.

41. N. *canora* (Scop.) Sonn. Voy. Ind. ii. t. 116. f. 2. — Certhia viridis *Lath.*; C. scarlatina *Sparm.* Mus. Carls. t. 58.

42. N. *angladiana* (Shaw). — Certhia lotenia *Linn.* Lath. Briss. Orn. t. 33. f. 4, 5., Pl. enl. 575. f. 2, 3., Vieill. Ois. dor. t. 3, 4.

43. N. *olivacea* (Linn.) Pl. enl. 575. f. 1.?

44. N. *aspasia* (Less.) Voy. de la Coqu. Ois. t. 30. f. 4.

45. N. *zenobia* (Less.) Voy. de la Coqu. Ois. t. 30. f. 3.

46. N. *eques* (Less.) Voy. de la Coqu. Ois. t. 30. f. 1.

47. *zeylonica* (Linn.) Vieill. Ois. dor. t. 16, 17. — Cinnyris sola *Jerd.* Jard. Sun-Birds, pl. 20.; Certhia dubia *Shaw*? Vieill. Ois. dor. t. 81.? ; Nectarinia philippensis *Meyen*; Certhia quadricolor *Scop.*? Sonn. Voy. t. 30. f. A.

48. N. *affinis* (Shaw) Gen. Zool. viii. p. 208., Vieill. Ois. dor. t. 32, 33. — Nectarinia coccinigastra *Temm.* Pl. col. 388. f. 3., Jard. Sun-Birds, pl. 21.; Certhia sperata *Linn.*? Pl. enl. 246. f. 1, 2.?; C. chalybea *Scop.* Sonn. Voy. t. 30. f. C.

49. N. *Hasseltii* Temm. Pl. col. 376. f. 3. — Certhia sperata *Raffl.*; C. brasiliensis *Shaw*, Jard. Sun-Birds, pl. 22., Verh. Nat. Gesch. &c., t. 10. f. 5.

50. N. *lotentia* (Linn.) — Certhia polita *Sparm.* Vieill. Ois. dor. t. xi., Edw. Birds, pl. 265. upp. fig.; C. purpurata *Shaw*, Jard. Sun-Birds, pl. 23.

51. N. *mahrattensis* (Lath.) Vieill. Ois. dor. t. 12., Edw. Birds, pl. 265. low. fig. — Cinnyris orientalis *Frankl.*; Certhia asiatica *Lath.*; Cinnyris cyaneus *Vieill.* Jard. Sun-Birds, pl. 24.; C. epauletta *Hodgs.*; C. currucaria *Linn.*

52. N. *minima* (Sykes), Proc. Z. S. 1832, p. 98., Jard. Sun-Birds, pl. (frontisp.).

53. M. *solaris* Temm. Pl. col. 347. f. 3., Verh. Nat. Gesch. t. 8. f. 5.

54. N. *pectoralis* Horsf. Linn. Trans. xiii. p. 167. — Nectarinia eximia *Temm.* Pl. col. 138., Pl. enl. 576. f. 4.?, Müll. Verh. Nat. Gesch. t. 9. f. 2.

55. N. *jugularis* (Linn.) Vieill. Ois. dor. t. 29, 30., Jard. Sun-Birds, pl. 26., Pl. enl. 576. f. 3.?

56. N. *frenata* Müll. Verh. Nat. Gesch. &c. t. 8. f. 1.

57. N. *Temminckii* Müll. Verh. Nat. Gesch. &c. t. 8. f. 2.

58. N. *hypogrammica* Müll. Verh. Nat. Gesch. &c. t. 8. f. 3.

59. N. *simplex* Müll. Verh. Nat. Gesch. &c. t. 8. f. 4.

60. N. *Pharei* Blyth, Journ. A. S. B. 1843, p. 1008.

61. N. *goalpariensis* (Royle) Ill. of Bot. pl. 7. f. 1. — Nectarinia scheriæ *Tick.*? Cinnyris Vigorsii *Sykes*; C. miles *Hodgs.* Jard. Sun-Birds, pl. 27.; C. concolor *Sykes.*

62. N. *Lathami* Jard. Sun-Birds, p. 233.

63. N. *eximia* Horsf. Linn. Trans. xiii. p. 181. — Nectarinia Kuhlii *Temm.* Pl. col. 376. f. 1, 2.

64. N. *nipalensis* (Hodgs.) Ind. Rev. 1837, p. 273. Jard. Sun-Birds, pl. 27.

65. N. *Gouldiæ* (Vigors), Proc. Z. S. 1830, p. 44. Gould, Cent. of B. pl. 56.

66. N. *Hodgsonii* Jard. — Cinnyris saturata *Hodgs.* Ind. Rev. 1837. p. 273., Jard. Sun-Birds, pl. 29.; C. assamensis *Mc Clell.*; Nectarinia saturata *Blyth.*

67. N. *igniecauda* (Hodgs.) Ind. Rev. 1837, p. 273. — Nectarinia phœnicura *Jard.*; Cinnyris epimecurus *Hodgs.*; C. rubricunda *Blyth*, Jard. Sun-Birds, pl. 29.

68. N. *insignis* Jard. Sun-Birds, p. 274. — Nectarinia pectoralis *Temm.* Pl. col. 138. f. 3.; N. calcostetha *Jard.*

69. N. *siparaja* (Raffl.) Linn. Trans. xiii. p. 299. — Nectarinia mystacalis *Temm.* Pl. col. 126. f. 3., Verh. Nat. Gesch. t. 9. f. 1.

70. N. *Horsfieldii* Blyth. Journ. A. S. B. xi. p. 107.

71. N. *labecula* (Mc Clell.) Proc. Z. S. 1839, p. 167.

72. N. *aurantia* (Gmel.).

73. N. *verticalis* (Lath.) Vieill. Ois. dor. t. 25.?

74. N. *frontalis* (Lath.).

75. N. *erythrothorax* (Vieill.) N. Dict. d'Hist. Nat. xxxi. p. 507.

76. N. *violaceofrons* (Vieill.) Encyc. Méth. p. 600.

77. N. *coccinigaster* (Lath.).

78. N.? *chrysoptera* (Lath.).

79. N.? *cirrhata* (Lath.).

80. N.? *erythrorhynchos* (Lath.).

81. N.? *macassariensis* (Gmel.) Seba, 1. t. 63. f. 3.

82. N. *manillensis* (Gmel.).

83. N. *amboinensis* (Gmel.) Seba, Thes. t. 26. f. 2.

84. N. *omnicolor* (Gmel.) Seba, Thes. t. 69. f. 5.
85. N. *parietum* (Lath.) — Sylvia indica *Vieill.*
86. N. *leucogaster* (Vieill.) N. Dict. d'Hist. Nat. xxxi. p.
87. N. *sola* (Vieill.) N. Dict. d'Hist. Nat. xxxi. p. 528.
88. N. *subflava* (Vieill.) N. Dict. d'Hist. Nat. xxxi. p. 494.
89. N. *ruficollis* (Vieill.) Ency. Méth. p. 600.
90. N. *indica* (Gmel.) Seba, t. 19. f. 2.
91. N. *tabacina* (Lath.)
92. N. *cinereicollis* (Vieill.) N. Dict. d'Hist. Nat. xxxi. p. 502.
93. N. *nigrescens* (Vieill.) Encyc. Méth. p. 600.
94. N. *nigrogaster* (Vieill.) Encyc. Méth. p. 600.
95. N. *malaccensis* (Scop.) Sonn. Voy. t. 116. f. 1. — Certhia lepida *Sparrm.* Mus. Carls. t. 35.; N. javanica *Horsf.*; Anthreptes javanica *Swains.* Zool. Illustr. pl. 121.; Type of Anthreptes *Swains.* (1831).
96. N. *cingalensis* (Lath.). — Nectarinia phœnicotis *Temm.* Pl. col. 108. f. 1.
97. N. *nuchalis* (Blyth) Journ. A. S. B. 1843, p. 980. — Anthreptes macularia *Blyth.*
98. N. *Fraseri* (Jard.) Ill. Orn. n. s. pl. 53.
99. N. *Longuemari* (Less.) Ill. Zool. t. 23. — Anthreptes leucosoma *Swains.* B. of W. Afr. pl. 17.
100. N. *melasoma* (Less.) Rev. Zool. 1840, p. 272.

Arachnothera *Temm.**

Bill long, curved, slightly depressed, and broad at the base; the sides compressed to the tip, which is acute; the gonys long and curved, and the lateral margins finely serrated near the tip: the nostrils lateral, basal, with the opening covered by a large membranous scale. *Wings* moderate and rounded, with the fourth and fifth quills equal and longest. *Tail* moderate, broad, and rather rounded. *Tarsi* shorter than the middle toe, strong, and covered in front with broad scales. *Toes* long; the outer toe slightly longer than the inner, and united at the base; the hind toe rather long and strong; the claws moderate, compressed, and curved.

The species of this division inhabit India, its archipelago, and New Guinea.

1. A. *longirostris* (Lath.) Pl. col. 84. f. 1.
2. A. *affinis* (Horsf.). — Nectarinia inornata *Temm.* Pl. col. 84. f. 2.; Cinnyris longirostris *Jerd.*
3. A. *chrysogenys* Temm. Pl. col. 388. f. 1. — Certhia longirostris *Raffl.*; Arachnothera flavigenis *Swains.*
4. A. *magna* (Hodgs.) Rev. Zool. 1837, p. 272. — Arachnothera inornata *Mac Clell.*; Anthrytes modesta *Eyton ?*
5. A. *flavigaster* (Eyton) Blyth, Proc. Z. S. 1839, p. 105.
6. A. *latirostris* Blyth, Journ. A. S. B. 1843, p. 982.
7. A. *robusta* Müll. & Sch. Verh. &c. t. 11. f. 1.
8. A. *armata* Müll. & Sch. Verh. &c. t. 11. f. 2.
9. A. *novæguineæ* Müll. & Sch. Verh. &c. t. 11. f. 3.

Dicæum *Cuv.*†

Bill short, curved, broad, and rather depressed at the base, with the culmen curved to the tip, which is acute, and finely serrated on the lateral margins; the sides compressed, and the gonys long and ascending: the nostrils lateral, and placed in a broad groove, with the opening linear and closed by a membranous scale. *Wings* moderate and rather pointed; with the first quill wanting; the second nearly as long as the third and fourth, which are equal and longest. *Tail* short and even. *Tarsi* longer than the middle toe, and strong. *Toes* moderate; the outer toe rather longer than

* Established by M. Temminck (*Pl. col.*).
† Established by Cuvier in 1817 (*Regne Animal*). It embraces *Prionochilus* of Mr. Strickland (1841), *Myzanthe* and *Pachyglossus* (1843) of Mr. Hodgson.

the inner, and united at the base; the hind toe long and strong; the claws moderate, compressed, and curved.

The species of this genus are found in India, its archipelago, and Australia. They are generally seen in pairs or in parties of four to five actively searching the small branches of high trees or bushes, and are continually hopping or flitting from branch to branch during the heat of the day while examining them and the leaves for the insects that lurk there, and upon which they feed. Mr. Packman informs me that these birds are particularly fond of the berries of a species of Loranthus which is common in the forests of Tenasserim. Although the berries are large they swallow them whole, and receive much nourishment from their glutinous nature, while the seed itself passing through the alimentary canal whole, contributes in no small degree in this way to the propagation of the parasitical plant which kills every tree it grows upon. The nest is suspended from a drooping twig with large leaves; the latter form a shelter, and near the top is a small opening for an entrance. It is composed chiefly of the seed-vessels of a syngenesious flower, held together by fibres of bark and other materials in a hemispherical form. The eggs are generally two.

1. D. *hirundinaceum* (Lath.) Lewin, N. H. Birds, pl. 7. — Sylvia rubricollis *Lath.*; Pipra gularis *Lath.*; P. Desmarestii *Leach*; Dicæum pardalotus *Cuv.*; D. atrogaster *Less.*; D. sanguineum *Swains.* Gould, B. of Austr. pl. ., Mag. de Zool. 1833. Ois. t. 14.

2. D. *celebicum* Müll. Verh. p. 162. — Dicæum Leclancherii *Lafr.*

3. D. *Maclotii* Temm. Pl. col.

4. D. *sanguinolentum* Temm. Pl. enl. 478. f. 2.

5. D. *papuense* (Lath.) Pl. enl. 707. f. 2.

6. D. *pectorale* Müll. Verh. &c. p. 162.

7. D. *erythrothorax* Less. Voy. de la Coqu. Ois. t. 30. f. 1, 2.

8. D. *trigonostigma* (Scop.) Sonn. Voy. Ind. t. 117. f. 2. — Certhia cantillans *Lath.*; Dicæum croceoventer *Vigors*, Temm. Pl. col. 478. f. 3.

9. D. *coccineum* (Scop.). — Certhia erythronota (*Lath.*), Sonn. Voy. Ind. t. 117. f. 1,, Vieill. Ois. dor. t. 35.; Certhia cruentata *Linn.* Edw. Birds, pl. 81.; Dicæum rubricapillum *Less.*; Nectarinia ignita *Begbie.*

10. *rubescens* Vieill. Levaill. Ois. d'Afr. t. 136. — Nectarinia rubrocana *Temm.*; Certhia erythropygia *Lath.*

11. D. *rubrum* (Gmel.). — Dicæum atriceps *Vieill.*; D. scarlatinum *Schintz.*

12. D. *chrysorrhæum* Temm. Pl. col. 478. f. 1.

13. D. *concolor* Jerd. Madr. Journ. Lit. & Sci. 1840, p. 227. — Nectarinia minima *Tick.*; Dicæum Tickellii *Blyth.*

14. D. *griseum* (Scop.) Sonn. Voy. t. 117. f. 3. — Certhia tæniata *Shaw*; Dicæum flaviceps *Vieill.*

15. D. *Maugei* Less. Tr. d'Orn. p. 303.

16. D. *pygmæum* Kittl. Mem. &c. de St. Petersb. 1835, t. 2.

17. D. *cinereum* Kittl. Kupf. Vog. Mem. &c. St. Petersb. 1835, t. 5.

18. D. (?) *aterrimum* Less. Tr. d'Orn. p. 303.

19. D. *nigrum* (Less.) Cent. de Zool. t. 30.

20. D. *chrysochlore* Blyth, Journ. A. S. B. 1843, p. 1009.

21. D. *ignipectus* (Hodgs.) Journ. A. S. B. 1843, p. 983. — Myzanthe inornata *Hodgs.*; Type of Myzanthe *Hodgs.* (1842).

22. D. ——, Voy. au Pole Sud. Ois. t. 22. f. 4.

23. D. *percussum* (Temm.) Pl. col. 394. f. 2. — Dicæum ignicapillum *Eyton*; Type of Prionochilus *Strickl.* (1841).

24. D. *thoracicum* (Temm.) Pl. col. 600. f. 1, 2.

25. D. *maculatum* (Temm.) Pl. col. 600. f. 3.

26. D. *obsoletum* (Müll. & Sch.) Verh. Nat. Gesch. p. 174.

27. D. *melanoxanthum* (Hodgs.) Journ. A. S. B. 1843, p. 1009, 1010.; Type of Pachyglossus *Hodgs.* (1842).

June, 1847.

C. Hullmandel's Patent Lithotint.

CONIROSTRUM
Sitticolor. Lafr.

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MATERIAL TESTING ACADEMY

C.Hullmandel's Patent Lithotint.

1. CÆREBA cyanea. 2. DACNIS cyanocephalus. 3. CERTHIOLA flaveola. 4. CONIROSTRUM albifrons.

The second Subfamily,

CÆREBINÆ, or GUITGUITS,

have the Bill longer or shorter than the head, sometimes curved throughout its length, or straight and acutely conical, the base broad, and the sides compressed, with the tip usually emarginated; the nostrils basal and lateral, and protected by a hard scale; the Wings long and rather pointed; the Tail short and mostly even; the Tarsi short, and the Toes moderate, slender, and the outer united at its base.

CÆREBA *Vieill.**

Bill lengthened, slender, arched, with the base broad, and the sides compressed towards the tip, which is acute and finely emarginated; the nostrils basal, lateral, and covered by a membranous scale. *Wings* moderate, with the first quill spurious, the second rather shorter than the third and fourth, which are nearly equal and longest. *Tail* short and square. *Tarsi* longer than the middle toe, and broadly scutellated. *Toes* short, with the lateral ones unequal, the outer rather the longest; the claws moderate, curved, and acute.

It is only in the warmer parts of South America, that the species of this genus are found. They are usually seen on plants in flower; these they examine for the small insects that usually hide in them, as well as for the nectar, which they are enabled to extract by means of their tongue. The nest is suspended from the ends of slender branches, and is in the form of a lengthened pear with a prolonged tube that bends towards the ground, with the entrance at the end. It is composed of dried grass and slender fibres. The eggs are deposited in the interior of the broad part, which protects the young from the attacks, not only of insects, but also of serpents and lizards. The young are said to be born blind, remaining so until they are in a fit state to fly.

1. C. *cyanea* (Linn.) Vieill. Pl. enl. 83. f. 2, Vieill. Ois. dorés, ii. t. 41, 42, 43. — Certhia cayana *Linn.* Pl. enl. 682. f. 2.; C. flavipes *Gmel.*; C. cyanogastra *Lath.*; C. armillata *Sparrm.* Mus. Carls. t. 36.
2. C. *cærulea* (Linn.) Vieill. Edwards's Birds, pl. 21. f. 1., Sparrm. Mus. Carls. t. 82., Vieill. Ois. dorés, t. 44, 45. — Certhia ochrochlora *Gmel.* Penn. Gen. of Birds, pl. 3. f. 2.; C. surinamensis *Lath.*; Fringilla cyanomelas *Gmel.*? Nov. Com. Petr. xi. t. 15. f. 6.
3. C. *gutturalis* (Linn.) Pl. enl. 578. f. 3.
4. C. *gularis* (Sparrm.) Vieill. Sparrm. Mus. Carls. t. 79.
5. C. *trochilea* (Sparrm.) Sparrm. Mus. Carls. t. 80.
6. C. *coccinea* (Linn.) — Certhia mexicana *Gmel.* Seba, t. 70. f. 8.
7. C. *fulva* (Gmel.).
8. C. *purpurea* (Gmel.) Seba, t. 72. f. 2.
9. C. *variegata* (Gmel.) Vieill. Seba, t. 3. f. 3.

DACNIS *Cuv.*†

Bill short and conical, with the culmen and lateral margin very slightly curved to the tip, which is acute; the side of the lower mandible at the base, broad and strong; and the gonys long, straight, and advancing upwards to the tip; the nostrils basal, lateral, and covered with a membranous scale. *Wings* moderate, with the first quill spurious, and the second nearly as long as the third and fourth, which are the longest. *Tail* moderate, and slightly emarginated. *Tarsi* long, the length of the middle toe, and broadly scutellated. *Toes* moderate, slender, with the lateral toe equal to the outer, which is united at the base; the hind toe long and slender; the claws rather long, compressed, and much curved.

* Established by Vieillot in 1807. It is coequal with *Nectarinia* of Cuvier (1817).
† Established by Cuvier in 1817 (*Règne Animal*, i. p. 395.)

These birds are found in pairs, or in small troops on the highest branches of the lofty trees of the South American forests, principally when they are in flower. The nests are formed on the summit of the isolated trees.

1. D. *cayanus* (Linn.) Cuv. Pl. enl. 669., Vieill. Gal. des Ois. t. 165.
2. D. *cyanocephalus* (Linn.) D'Orb. Swains. Zool. Illustr. ii. pl. 117. — Dacnis cyanater *Less.*; Cæreba cærulea *Vieill.*
3. D. *plumbeus* (Lath.) Cabanis.
4. D. *flaviventer* D'Orb. Voy. dans l'Amér. Mérid. Ois. t. 13. f. 2.
5. D. *bicolor* Boekt. Mem. Mosc. vii. pl. 23.
6. D. *brasilianus* (Gmel.) Briss. Orn. iii. t. 32. f. 4.
7. D. *spiza* (Linn.) Seba, ii. t. 3. f. 4.
8. D. *atricapillus* (Vieill.) — Certhia spiza var. *β Lath.*; Merops spiza *Merr.* Ic. Av. t. 5., Pl. enl. 578. f. 2., Vieill. Ois. dorés, t. 49., Pl. enl. 578. f. 1. 682. f. 1., Edwards's Birds, pl. 348.; Nectarinia mitrata *Licht.*
9. D. *analis* D'Orb. & Lafr. Syn. Av. p. 21.

Conirostrum *D'Orb. & Lafr.**

Bill short, acutely conical, with the culmen and the gonys straight to the tip; the base rather broad, and much compressed on the sides; the nostrils basal, lateral, with the opening linear, and covered by a hard scale, which is partly clothed with minute plumes. *Wings* long, with the first quill spurious, and the second nearly as long as the third and fourth, which are the longest. *Tail* long, and slightly emarginated. *Tarsi* as long as the middle toe, and covered by broad scales. *Toes* moderate, slender, with the lateral ones nearly equal; the hind toe long, and rather strong; the claws long and curved.

The species are found in the tropical parts of South America.

1. C. *cinereum* D'Orb. & Lafr. Syn. Av. p. 25. Voy. dans l'Amér. Mérid. Ois. t. 59. f. 2.
2. C. *albifrons* Lafr. Rev. Zool. 1842. p. 102., Mag. de Zool. 1843. Ois. t. 35.
3. C. *sitticolor* Lafr. Rev. Zool. 1842. p. 102.
4. C. *superciliosum* Hartl. Rev. Zool. 1844. p. 215.

Certhiola *Sundev.*†

Bill moderate, broad at the base; the sides much compressed, and the culmen curved towards the tip, which is acute; the gonys lengthened, angulated, and arched to the acute tip; the nostrils lateral, basal, lunulate, and covered by a membranous scale. *Wings* moderate, with the first quill spurious, and the second shorter than the third and fourth. *Tail* moderate and rounded. *Tarsi* longer than the middle toe, and broadly scutellated. *Toes* moderate, with the lateral ones unequal, the outer the longest; the claws moderate and curved.

The typical species is found in the warmer parts of South America, and in the islands of the West Indies, especially in places that abound with flowering plants and insects. It is usually seen searching the flowers, and extracting from them the minute insects and nectar, by means of its feathered tongue. It may be observed sitting immoveable on a branch, repeating for whole hours its monotonous notes, which, however, are rather pleasing. It suspends its nest from the ends of the flexible branches, especially from those that hang over the middle of the streams, in the form of an ostrich's egg, and composed of moss and dried grass exteriorly, and of cotton and the down of plants interiorly. The entrance is on the under side, which faces the water; the interior is divided into two compartments, one portion forming an entry for the bird to the larger division. It is in this latter on the lower surface that the female deposits her eggs, which are thus protected from the attacks of insects, snakes, and reptiles, that would otherwise feed on them.

C. *flaveola* (Linn.) Sundev. Edwards's Birds, pl. 122. pl. 362. f. 2., Catesby's Car. pl. 59. — Certhia bartholemica *Sparrm.* Mus. Carls. t. 57. Zool. Illustr. ii. pl. 142.; Nectarinia antillensis *Less.*

* Established by M. D'Orbigny and Baron Lafresnaye in 1842 (*Synopsis Avium, Mag. de Zool.* 1842, p. 25.)
† Established by M. Sundevall in 1835 (*Vet. Acad. Handl.* 1835, p. 99.)

Wolf del et lith.

Printed by Bellmandel & Walton.

PHAETORNIS
Pretrei.

The third Family,

TROCHILIDÆ, or HUMMING-BIRDS,

have the Bill generally long, slender, straight or curved, with the culmen usually rounded and the tip acute; the lateral margins sometimes dilated over the lower mandible; the Nostrils basal, and covered by a large scale, which is sometimes plumose: the Wings generally long, with the first quill usually the longest: the Tail more or less long, and of various forms: the Tarsi very short, and generally slender: the Toes long, slender; the lateral toes usually united at their base; the hind toe moderate, and furnished with a more or less lengthened claw.

The first Subfamily,

GRYPINÆ, or WEDGE-TAILED HUMMING-BIRDS,

have the Bill more or less long, slender, and generally curved throughout its length; with the culmen keeled at the base, and then rounded to the tip, which is acute; the lateral margins dilated, and overlapping the lower mandible; the nostrils basal, and covered by a scale: the Wings long and pointed: the Tail long, broad, and generally cuneated: the Tarsi short and slender: the Toes long, slender, and sometimes united at their base; the hind toe more or less long and slender: the anterior Claws long and slender, and that of the hind toe sometimes very small.

PHÆTORNIS *Swains.**

Bill very long, slightly curved throughout, with the base broad, and the sides gradually compressed to the tip, which is very acute; the lateral margins dilated, and overlapping the lower mandible; the culmen keeled above the nostrils, and then rounded to the end; the nostrils basal, with the opening covered by a slightly plumose scale. *Wings* long and pointed, with the first quill the longest. *Tail* lengthened, composed of broad feathers, and cuneated, with the ends of the two middle feathers much prolonged. *Tarsi* very short, slender, and clothed with feathers. *Toes* long and very slender, with the lateral ones united to the middle toe at the base, and equal; the hind toe short and slender, and armed with a short curved claw; the claws of the fore toes long, curved, and acute.

The species of this division are found in the warmer parts of South America.

* Mr. Swainson established this genus in 1827. (*Zool. Journ.* 1827, p. 357.)

1. P. *superciliosus* (Linn.) Pl. enl. 600. f. 3., Ois. dor. t. (17.) 18, 19., Less. Col. t. 6, 7., Nat. Libr. xv. pl. 26, 27.
2. P. *malaris* (Licht.) Erman, Verz. von Thier. und Pflanz. &c. p. 2., Vieill. Ois. dor. t. 17.
3. P. *melanotis* (Licht.) Erman, Verz. von Thier. und Pflanz. &c. p. 2.
4. P. *leuophrys* (Licht.) Erman, Verz. von Thier. und Pflanz. &c. p. 2.
5. P. *eurynomus* (Less.) Troch. t. 31., Nat. Libr. xv. pl. 28.
6. P. *Guy* (Less.) Troch. t. 44.
7. P. *Emiliæ* (Bourc. & Muls.) Ann. Sci. Phys. &c. Lyon, 1846. p. 347.
8. P. *intermedius* (Less.) Troch. t. 19.
9. P. *Bourcieri* (Less.) Troch. t. 18.
10. P. *brasiliensis* (Briss.)—Trochilus squalidus *Natt.* Pl. col. 120. f. 1., Less. Col. t. 8.
11. P. *Longuemareus* (Less.) Troch. t. 2. 62.
12. P. *rufigaster* (Vieill.) N. Dict. d'Hist. Nat. vii. p. 357., Less. Col. t. 9., Nat. Libr. xiv. pl. 4.—Trochilus pygmæus *Spix*, Av. Bras. t. 80. f. 1.
13. P. *Davidianus* (Less.) Troch. t. 13.
14. P. *hispidus* Gould, Proc. Z. S. 1846. p. 90.
15. P. *anthophilus* (Bourc.) Rev. Zool. 1843. p. 71.
16. P. *Pretrei* De Lattr. et Less. Rev. Zool. 1839. p. 20.
17. P. *apicalis* (Licht.) Tschudi, Fauna Peru. p. 243.
18. P. *Philippii* (Bourc.) Ann. Sci. Phys. &c. de Lyon, 1847. p. 623.
19. P. *Augusta* (Bourc.) Ann. Sci. Phys. &c. de Lyon, 1847. p. 623.
20. ? P. *conurus* (Steph.) Gen. Zool. xiv. p. 240.—Wedge-tailed Humming-bird *Lath.* Hist. of B. iv. p. 305.; Trochilus pavoninus *Lath. MS.*
21. P. *ciliatus* (Lath. MS.)—Buff-striped Humming-bird *Lath.* Hist. ix. p. 294.

Oreotrochilus *Gould.**

Bill rather longer than the head, slender, and slightly curved; with the culmen keeled above the nostrils, and then rounded to the tip, which is rather acute; the lateral margins dilated; the nostrils basal, placed in a groove, which reaches two thirds the length of the bill, with the opening concealed by the projecting plumes. *Wings* long and pointed, with the first quill the longest. *Tail* long, rounded at the end, and composed of rather narrow feathers. *Tarsi* short, slender, and partly clothed with plumes. *Toes* long, slender, and free at their base; the lateral ones nearly equal; the hind toe long, slender, and armed with a long, strong, and slightly curved claw; the anterior claws moderately long, much curved, and acute.

The species are found on the mountains of the western side of South America, immediately, says Mr. Gould, beneath the line of perpetual congelation, where they feed upon the small hemipterous insects which resort to the newly expanded flowers.

1. O. *Estella* (D'Orb. & Lafr.) Gould, Voy. dans l'Amér. Mér. Ois. t. 61. f. 1.—Ornismya Ceciliæ *Less.*
2. O. *leucopleurus* Gould, Proc. Z. S. 1847. p. 10.
3. O. *chimborazo* (Bourc.) Gould, Rev. Zool. 1846. p. 305.
4. O. *adela* (D'Orb. & Lafr.) Gould, Voy. dans l'Amér. Mér. Ois. t. 61. f. 2.
5. O. *melanogaster* Gould, Proc. Z. S. 1847. p. 10.

Grypus *Spix.*†

Bill much longer than the head, straight, and strong; with the culmen keeled for more than half its length, and then rounded to the tip, which is acute; the lateral margins dilated and serrated; the nostrils basal and oblique, with the opening covered by a partly plumose scale. *Wings* long and pointed, with

* Mr. Gould established this genus in 1847. (*Proc. Zool. Soc.* 1847, p. 9.)
† Established by Spix in 1824. *Ramphodon* of M. Lesson (1829) is synonymous.

the first quill the longest. *Tail* long, broad, rounded at the end, and composed of broad feathers. *Tarsi* very short, slender, and partly plumose. *Toes* long and slender, with the lateral ones united at their base, especially the outer one, which is rather shorter than the inner; the hind toe short, and armed with a very short curved claw; those of the fore toes long, slender, curved, and very acute.

The typical species of this genus is found in Brazil, especially on the mountain of Corcovado in the neighbourhood of Rio Janeiro.

1. G. *nævius* (Dumont), Dict. des Sci. Nat. xvii. p. 432., Pl. col. 120. f. 3.—Trochilus squamosus *Licht.*; Grypus ruficollis *Spix*, Av. Bras. t. 80. f. 3.; Ramphodon maculatum *Less.* Col. t. 1., Nat. Libr. xiv. pl. 1.

December, 1848.

Wolf del. et lith. Printed by Hullmandel & Walton.

POLYTMUS
aquilus (Lodd.)

The second Subfamily,

TROCHILINÆ, or CURVED-BILLED HUMMING-BIRDS,

have the Bill more or less long, slender, and curved; the lateral margins usually dilated, and overlapping the lower mandible; the nostrils basal, with the opening covered with a large scale, which is sometimes entirely concealed by the projecting plumes: Wings long and pointed: the Tail more or less long, and of various forms: the Tarsi very short: the Toes long and slender, with the lateral ones united at their base; the hind toe long, and armed with a more or less lengthened curved claw.

POLYTMUS *Briss.**

Bill more or less long, slender, and curved, with the culmen slightly keeled at the base, and then rounded to the tip, which is acute; the base broad; the frontal plumes projecting partly over the nostrils; the lateral margins dilated over the lower mandible; the nostrils basal, with the opening covered by a large prominent scale. *Wings* generally long and pointed, with the first quill the longest; sometimes the first three quills are enlarged near their base. *Tail* generally long, broad, and mostly rounded. *Tarsi* very short, slender, and partly clothed with plumes. *Toes* rather long, very slender; the inner toe rather longer than the outer, both united at their base, especially the latter; the hind toe long, and furnished with a moderate curved claw.

The species of this division are found in the central and warmer portions of America.

1. P. *largipennis* (Bodd.) Pl. enl. 672. f. 2., Ois. dor. t. 5. 21., Less. Ois. Mouch. t. 34., Swains. Zool. Ill. pl. 130, 131., Nat. Libr. xiv. pl. 34. — Trochilus campylopterus *Gmel.*; T. latipennis *Lath.*; T. cinereus *Gmel.*; Type of Campylopterus *Swains.* (1827).

2. P. *ensipennis* (Swains.) Zool. Illustr. pl. 107., Less. Ois. Mouch. t. 35., Troch. t. 46, 47.

3. P. *lazulus* (Vieill.) Ency. Méth. p. 557., Gal. des Ois. t. 179. — Trochilus falcatus *Swains.* Zool. Illustr. pl. 83., Less. Ois. Mouch. t. 36.

4. P. *cirrochloris* (Vieill.) N. Dict. d'Hist. Nat. xxxiii. p. 430. — Trochilus campylostylus *Licht.*; Ornismya simplex *Less.* Ois. Mouch. t. 33., Suppl. t. 6.

5. P. *rufus* (Less.) Rev. Zool. 1840. p. 73.

6. P. *De Lattre* (De Lattr. & Less.) Rev. Zool. 1839. p. 14.

7. P. *pampa* (Less.) Ois. Mouch. Suppl. t. 15.

8. P. *Cuvierii* (De Lattr. & Bourc.) Rev. Zool. 1846. p. 310.

9. P. *macrourus* (Gmel.) Briss. Orn. iii. t. 36. f. 9. — Trochilus forcipatus *Lath.* Less. Ois. Mouch. t. 25., Col. Suppl. t. 39., Shaw, Nat. Misc. pl. 222.

10. P. *mango* (Linn.) Pl. enl. 680. f. 2, 3., Ois. dor. t. 7., Less. Col. t. 13, 13*, 14, 15., Nat. Libr. xv. pl. 20., Swains. B. of Bras. pl. 27, 28. — Trochilus violicauda *Bodd.*; T. albus *Gmel.*; T. nitidus *Lath.* Pl. enl. 671. f. 2.; T. punctulatus *Gmel.*? Azara, No. 295.; T. atricapillus *Vieill.*; T. fasciatus *Shaw*, Azara, No. 296.; T. quadricolor *Vieill.*; T. punctatus *Vieill.* Ois. dor. t. 8. 11.; T. nigricollis *Vieill.*?; Type of Lampornis *Swains.* (1827).

* Established by Brisson in 1760. It embraces *Campylopterus* of Mr. Swainson (1827), *Lampornis* of Mr. Swainson (1827), with which *Anthracothorax* of M. Boie (1831) is synonymous; *Eulampis* of M. Boie (1831); *Petasophora* of G. R. Gray (1840), with which *Colibri* of Spix (1824) is coequal; *Glaucis* of M. Boie (1831); *Les Emeraudes* and *Les Amixilis* of M. Lesson (1829), and *Les Glaucopes* of M. Lesson (1829), which with *Smaragdites* and *Mellisuga* of M. Boie (1831) are synonymous.

11. P. *dominicus* (Linn.) Briss. Orn. iii. t. 34. f. 4. — Trochilus gramineus *Gmel.*; T. pectoralis *Lath.* Ois. dor. t. 9, 10. 44. 70.; T. maculatus *Gmel.* Pl. enl. 671. f. 1.; T. gularis *Lath.* Azara, No. 298.?; T. marmoratus *Vieill.*?; T. maculatus *Vieill.* Ois. dor. t. 40.?

12. P. *viridis* (Vieill.) Ois. dor. t. 15. — Trochilus aureoviridis *Shaw*, Less. Col. t. 11.

13. P. *margaritaceus* (Gmel.) Pl. enl. 680. f. 1. — Trochilus aurulentus *Vieill.* Ois. dor. t. 12, 13. 16.; T. striatus *Gmel.*?; T. hylophæus *Lath.*?

14. P. *holosericeus* (Linn.) Edwards's Birds, pl. 36. f. 1., Ois. dor. t. 6., Less. Col. t. 20. — Trochilus atrigaster *Shaw.* Ois. dor. t. 65.

15. P. *Prevostii* (Less.) Col. t. 24., Bourc. & Muls. Ann. Sci. Phys. &c. Lyon, 1843. p. 39.

16. P. ——? — Ornismya Anais *Less.* Rev. Zool. 1838. p. 315.

17. P. *Buffoni* (Less.) Troch. t. 5., Nat. Libr. xv. pl. 19.

18. P. *cæruleogaster* (Gould), Proc. Z. S. 1847. p. 96.

19. P. *jugularis* (Linn.) Edwards's Birds, pl. 266. f. 1. — Trochilus auratus *Gmel.*; T. granatinus *Lath.* Gen. Syn. ii. pl. 34., Ois. dor. t. 4., Less. Col. t. 10.; T. Bancroftii *Lath.*; T. cyanomelas *Gmel.*; Type of Eulampis *Boie* (1831).

20. P. *porphyrurus* (Shaw), Nat. Misc. pl. 333. — Trochilus bromicolor *Less.*; T. Floresii *Bourc.*

21. P. *leucurus* (Linn.) Pl. enl. 600. f. 4., Edwards's Birds, pl. 256. f. 2., Less. Col. t. 22.

22. P. *cyanopectus* (Gould), Proc. Z. S. 1846. p. 88.

23. P. *aurescens* (Gould) Proc. Z. S. 1846. p. 88.

24. P. *serrirostris* (Vieill.) N. Dict. d'Hist. Nat. vii. p. 359. — Trochilus petasophorus *Pr. Max.*; Grypus? Vieillotii *Steph.* Less. Ois. Mouch. t. 1., Nat. Libr. xiv. pl. 13. xv. pl. 15.; Colibri crispus *Spix*, Av. Bras. t. 81. f. 1.; Type of Petasophora *G. R. Gray* (1840).

25. P. *cyanotus* (Bourc.) Rev. Zool. 1843. p. 101., Ann. Sci. Phys. &c. Lyon. 1843. p. 41.

26. P. *thalassinus* (Swains.) Ann. Phil. 1827. p. 441., Less. Troch. t. 55, 56, 57., Ois. Mouch. t. 3., Nat. Libr. xv. pl. 1, 2.

27. P. *Anais* (Less.) Ois. Mouch. Suppl. t. 3.

28. P. *iolatus* (Gould), Proc. Z. S. 1847. p. 9.

29. P. *coruscans* (Gould), Proc. Z. S. 1846. p. 44.

30. P. *Delphinæ* (Less.) Rev. Zool. 1839. p. 41., Less. Ill. de Zool. t. 64.

31. P. *Geoffroyi* (Bourc. & Muls.) Ann. Sci. Phys. de Lyon, 1843. p. 37. t. 3.

32. P. *Mazeppa* (Less.) Troch. t. 3.

33. P. *hirsutus* (Gmel.) Ois. dor. t. 20. 68. — Trochilus brasiliensis *Lath.* Less. Col. t. 21., Nat. Libr. xv. pl. 29., Illustr. of Orn. pl. 143.; Type of Glaucis *Boie* (1831).

34. P. *simplex* (Less.) Col. t. 23.

35. ? P. *multicolor* (Gmel.) Lath. Gen. Syn. pl. 111., Ois. dor. t. 69., Nat. Libr. xiv. pl. 31. — Trochilus histrio *Shaw.*

36. P. *chrysurus* (Shaw), Gen. Zool. viii. p. 335. — Trochilus ruficollis *Vieill.* N. Dict. d'Hist. Nat. vii. p. 362., Azara, No. 290, 291.

37. P. *Antoniæ* (Bourc. & Muls.) Ann. Sci. Phys. de Lyon, 1846. p. 329.

38. P. *Ruckeri* (Bourc.) Proc. Z. S. 1847. p. 46.

39. P. *aquila* (Lodd.) Proc. Z. S. 1847. p. 42.

40. P. *Thaumatias* (Linn.) Pl. enl. 600. f. 1. — Ornismya albiventer *Less.* Ois. Mouch. t. 76., Troch. t. 32.; Type of Polytmus *Briss.* (1760).

41. P. *mellisugus* (Linn.) Briss. Orn. iii. t. 41. f. 2. A., Pl. enl. 276. f. 3., Ois. dor. t. 39. — Trochilus leucogaster *Gmel.* Pl. enl. 672. f. 3., Ois. dor. t. 43.; Ornismya albirostris *Less.* Ois. Mouch. t. 78.; Mellisuga concinna *Steph.*

42. P. *aureoventris* (D'Orb. & Lafr.) Syn. Av. p. 28. (Mag. de Zool.)

43. P. *albicollis* (Vieill.) N. Dict. d'Hist. Nat. xxxiii. p. 426., Pl. col. 203. f. 2., Less. Ois. Mouch. t. 63. — Colibri albigularis *Spix*, Av. Bras. t. 82. f. 1.

44. P. *brevirostris* (Less.) Ois. Mouch. t. 77.

45. P. *candidus* (Bourc. & Muls.) Ann. Sci. Phys. &c. de Lyon, 1846. p. 326.

46. P. *Milleri* (Lodd.) Proc. Z. S. 1847. p. 43.

47. P. *tephrocephalus* (Vieill.) N. Dict. d'Hist. Nat. xxiii. p. 430., Less. Ois. Mouch. t. 70.

48. P. *senex* (Less.) Rev. Zool. 1838. p. 315.

49. P. *chionogaster* (Tschudi), Fauna Per. p. 247. t. 22. f. 2. — Trochilus leucogaster *Tsch.*

50. P. *viridissimus* (Gmel.) — Ornismya viridis *Less.* Troch. t. 33.; Trochilus viridicaudus *Saucerr.*

51. P. ——? — Trochilus viridissimus *Vieill.* Ois. dor. t. 42., Less. Ois. Mouch. t. 75.

52. P. *chrysobronchos* (Shaw) Ois. dor. t. 41. — Trochilus viridis *Vieill.*; T. chloroleucurus *Saucerr.*; T. virescens *Dum.* Less. Ois. Mouch. t. 60.

53. P. *cinereicollis* (Vieill.) N. Dict. d'Hist. Nat. vii. p. 359. — Azara, No. 294.

54. P. *cyanurus* (Vieill.) N. Dict. d'Hist. Nat. vii. p. 369. — Azara, No. 292.

55. P. *fallax* (Bourc.) Rev. Zool. 1843. p. 103., Ann. Sci. Phys. &c. Lyon, 1843. p. 44. — Trochilus (Lampornis?) fulviventris *Gould.*

56. P. *hypoleucos* (Gould), Proc. Z. S. 1846. p. 90. — Trochilus Turneri *Bourc.*

57. P. *viridi-pallens* (Bourc. & Muls.) Ann. Sci. Phys. &c. de Lyon, 1846. p. 321.

58. P. *glaucopis* (Gmel.) Briss. Orn. iii. t. 36. f. 5. — Trochilus frontalis *Lath.* Less. Ois. Mouch. t. 58, 59.; Type of Glaucopes *Less.* (1829).

59. P. *glaucopoïdes* (D'Orb. & Lafr.) Syn. Av. p. 27., Mag. de Zool.

60. P. *Columbicus* (Bourc.) Rev. Zool. 1843. p. 2., Ann. Sci. Phys. &c. de Lyon, 1843. t. 6.

61. P. *furcatus* (Gmel.) Briss. Orn. iii. t. 37. f. 6., Pl. enl. 599. f. 2., Ois. dor. t. 34., Less. Ois. Mouch. Suppl. t. 18., Nat. Libr. xiv. pl. 23.

62. P. *nigrofasciatus* (Gould), Proc. Z. S. 1846. p. 89.

63. P. *furcifer* (Shaw), Gen. Zool. viii. p. 280. — Trochilus caudacutus *Vieill.* N. Dict. d'Hist. Nat. vii. p. 347., Azara, No. 299.

64. P. *Eriphile* (Less.) Ois. Mouch. Suppl. t. 25.

65. P. *Watertoni* (Bourc.) Proc. Z. S. 1847. p. 44.

66. P. *cyanifrons* (Bourc.) Rev. Zool. 1843. p. 100., Ann. Sci. Phys. &c. Lyon, 1843. p. 42. — Trochilus otero *Tschudi.*

67. P. *Saucerrottei* (Bourc. & De Lattr.) Rev. Zool. 1846. p. 311.

68. P. *Goudoti* (Bourc.) Rev. Zool. 1843. p. 100., Ann. Sci. Phys. &c. Lyon, 1843. p. 47.

69. P. *minullus* (Vieill.) Encyc. Méth. p. 574.

70. P. *Amazili* (Less.) Voy. de la Coqu. Ois. t. 31. f. 1., Ois. Mouch. t. 12, 13. — Trochilus latirostris *Swains.*; Type of Amizilis *Less.* (1829).

71. P. *Norrissii* (Bourc.) Proc. Z. S. 1847. p. 47.

72. P. *Riefferi* (Bourc.) Rev. Zool. 1843. p. 103., Ann. Sci. Phys. &c. Lyon, 1843. p. 45.

73. P. *Aglaiæ* (Bourc. & Muls.) Ann. Sci. Phys. &c. de Lyon, 1846. p. 329.
74. P. *corallirostris* (Bourc. & Muls.) Ann. Sci. Phys. &c. de Lyon, 1846. p. 328.
75. P. *Arsinoe* (Less.) Ois. Mouch. Suppl. t. 28, 29.
76. P. *Sophiæ* (Bourc. & Muls.) Ann. Sci. Phys. &c. de Lyon, 1846. p. 318.
77. P. *Edwardsii* (De Lattr. & Bourc.) Rev. Zool. 1846. p. 308.
78. P. *erythronotus* (Less.) Ois. Mouch. t. 61.
79. P. *Dumerilii* (Less.) Ois. Mouch. Suppl. t. 36.
80. P. *Œnone* (Less.) Ois. Mouch. Suppl. t. 30. — Type of Chrysures *Less.* (1829).
81. P. *chrysura* (Less.) Ois. Mouch. Suppl. t. 4.
82. P. *Eliciæ* (Bourc. & Muls.) Ann. Sci. Phys. &c. de Lyon, 1846. p. 314.
83. P. *phœopyga* (Licht.) Tschudi, Fauna Per. p. 247.
84. P. *cinnamomea* (Less.) Rev. Zool. 1842. p. 175.
85. P. *quadricolor* (Vieill.) Ency. Méth. p. 573. — Ornismya cyanocephala *Less.* Ois. Mouch. Suppl. t. 18.
86. P. *verticalis* (Licht.) — Ornismya cyanocephala *Less.* Ois. Mouch. Suppl. t. 17., Nat. Libr. xiv. pl. 9.
87. P. *Franciæ* (Bourc. & Muls.) Ann. Sci. Phys. &c. Lyon, 1846. p. 324.
88. P. *euryptera* (Lodd.) Proc. Z. S. 1832. p. 7.
89. P. *Georginæ* (Bourc.) Proc. Z. S. 1847. p. 48.

Trochilus *Linn.**

Bill weak, longer than the head, broad at the base, and more or less curved, with the culmen rounded, the lateral margins dilated, especially at the base, and covering the lower mandible; the nostrils basal, with the opening closed by a large and partly plumose scale. *Wings* long and pointed, with the first quill rather shorter than the second. *Tail* moderate and emarginated, with two prolonged narrow feathers projecting much beyond the others. *Tarsi* very short, rather stout, and partly plumed. *Toes* moderate, slender; the inner one shorter than the outer, which is more united at the base than the inner one; the hind toe moderate, and armed with a moderate curved claw.

The type of this genus is peculiar to the Island of Jamaica, and the habits, as described by Mr. Gosse, are very similar to those of the genus *Mellisuga.*

P. *polytmus* Linn. Edwards's Birds, pl. 34., Ois. dor. t. 67. — Ornismya cephalatra *Less.* Ois. Mouch. t. 17., Nat. Libr. xv. pl. 21.

Topaza *G. R. Gray.*†

Bill longer than the head, stout, and slightly curved, especially at the tip, which is acute; the culmen keeled above the nostrils, and then rounded, and the lateral margins dilated over the lower mandible; the nostrils basal, with the opening covered by a large scale, which is mostly concealed by the frontal plumes. *Wings* long and pointed, with the first quill the longest. *Tail* moderate, broad, and slightly emarginated or rounded, with two narrow feathers on each side prolonged beyond the others. *Tarsi* very short, slender, and partly covered with plumes. *Toes* long and slender; the lateral ones united at the base, with the outer shorter than the inner one; and the hind toe long, and armed with a small curved claw.

The species are inhabitants of the central and warmer parts of America.

* Established by Linnæus in 1748. It was originally founded in 1744, with the name of *Troglodytes*, by the same author. *Les Polythmus* of M. Lesson, 1829, is coeval.
† Established by M. Lesson under the designation of *Les Topazes* (1829).

1. T. *pella* (Linn.) G. R. Gray, Pl. enl. 599. f. 1., Edwards's Birds, pl. 32. f. 1., Shaw, Zool. Misc. pl. 513., Ois. dor. t. 2, 3., Less. Col. t. 2, 3, 4, 5., Nat. Libr. xv. t. 24, 25. — T. paradiseus *Linn.* ?

2. ? T. *violacea* (Gmel.) Pl. enl. 600. f. 2., Briss. iii. t. 35. f. 3.

3. T. *pyra* Gould, Proc. Z. S. 1846. p. 85.

4. T. *atra* (Pr. Max.) Beitr. i. p. . — Trochilus atratus *Licht.* Cat. Dupl. Berl. Mus. p. 14.; T. niger *Swains.* Zool. Illustr. pl. 82.; T. fuscus *Vieill.*; Ornismya lugubris *Less.* Ois. Mouch. t. 38, 39.; Colibri leucopygius *Spix,* Av. Bras. t. 81. f. 3.

5. T. *opaca* (Licht.) Tschudi, Fauna Per. p. 248.

6. T. *mellivora* (Linn.) Edwards's Birds, pl. 35. f. 1., Pl. enl. 640. f. 2., Ois. dor. t. 23., Nat. Libr. xiv. pl. 10.; Mellisuga surinamensis *Steph.*

7. ? T. *fimbriata* (Gmel.) Briss. Orn. iii. t. 36. f. 2., Pl. enl. 276. f. 2., Ois. dor. t. 22. 24.

8. T. *flabellifera* (Gould), Proc. Z. S. 1846. p. 45.

9. T. *Henrica* (Less. & De Lattr.) Rev. Zool. 1839. p. 17.

Calothorax *G. R. Gray.**

Bill long, very slender, and curved throughout its length, with the base broad and covered with the projecting plumes; the culmen rounded to the tip, which is acute, and the lateral margins partly covering the lower mandible; the nostrils basal, and concealed by the frontal plumes. *Wings* moderate and pointed, with the first quill the longest. *Tail* more or less long, usually forked, and composed of broad or narrowed feathers, with their ends either acute or rounded. *Tarsi* very short, slender, and partly clothed with plumes. *Toes* moderate, very slender; the fore toes united at their base, especially the outer toe, which is shorter than the inner; the hind toe moderate, slender, and furnished with a small claw.

It is in the central and warmer parts of America that the species which compose this division are found.

1. C. *Lafresnayi* (Boiss.) Rev. Zool. 1848. p. 8. — Trochilus flavicaudatus *Fras.*

2. C. *Gayi* (Bourc. & Muls.) Ann. Sci. Phys. &c. de Lyon, 1846. p. 325.

3. C. *Saulii* (De Lattr. & Bourc.) Rev. Zool. 1846. p. 309.

4. C. ? *Schreibersii* (Lodd.) Proc. Z. S. 1847. p. 43.

5. C. *enicurus* (Vieill.) N. Dict. d'Hist. Nat. xxiii. p. 429., Temm. Pl. col. 66. f. 3. — Ornismya heteropygia *Less.* Ois. Mouch. t. 15., Nat. Libr. xiv. pl. 27.; O. Swainsoni *Less.* Troch. t. 66.

6. C. *cora* (Less. & Garn.) Voy. de la Coqu. Ois. t. 13. f. 4., Ois. Mouch. t. 6., Troch. t. 39, 40., Nat. Libr. xiv. pl. 25.

7. C. *Yarrellii* (Bourc.) Proc. Z. S. 1847. p. 45.

8. C. *Eliza* (Less. & De Lattr.) Rev. Zool. 1839. p. 20.

9. C. *Evelynæ* (Bourc.) Proc. Z. S. 1847. p. 44.

10. C. *lucifer* (Swains.) Phil. Mag. 1827. p. 442. — Ornismya cyanopogon *Less.* Ois. Mouch. t. 5., Col. Suppl. t. 9, 10., Nat. Libr. xv. pl. 14.; Type of Calothorax *G. R. Gray* (1840).

11. C. *Calliope* (Gould), Proc. Z. S. 1847. p. 11.

12. C. *Herrani* (De Lattr. & Bourc.) Rev. Zool. 1846. p. 309.

13. C. *vesper* (Less.) Ois. Mouch. t. 19., Troch. t. 9. 48., Nat. Libr. xiv. pl. 24.

14. C. *Fanny* (Less.) Ann. Sci. Nat. ix. p. 170. — Trochilus labrador *Bourc.* Ann. Sci. Phys. &c. de Lyon, 1838. p. . t. .

15. C. *angelæ* (Less.) Ill. Zool. t. 49, 50.

* M. Lesson originally established this division under the name of *Les Lucifers* in 1829, which was changed by me to the above name in 1840.

Wolf del et lith.

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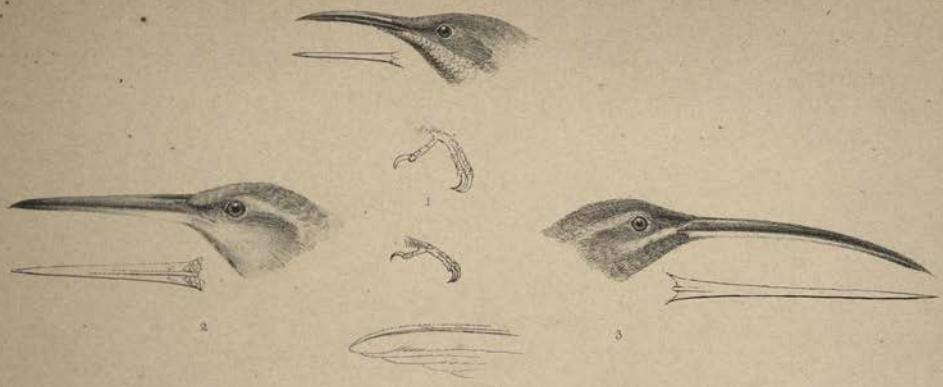
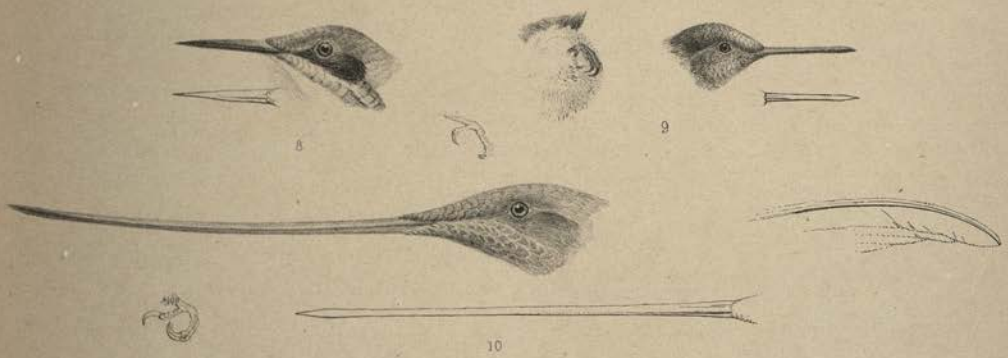
MELLISUGA
mirabilis.(Lodd.)

GRYPINÆ.



TROCHILINÆ.

MELLISUGINÆ.



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1 OREOTROCHILUS leucopleurus. 2. GRYPUS nævius. 3 PHÆTORNIS superciliosa.
4 CALOTHORAX Lafresnayi. 5 POLYTMUS ensipennis. 6 TROCHILUS polytmus. 7 TOPAZA pella.
8 HELIOTHRIX aurituS. 9 HYLOCHARIS alme 10 MELLISUGA ensifera.

The third Subfamily,

MELLISUGINÆ, or STRAIGHT-BILLED HUMMING-BIRDS,

have the Bill more or less lengthened, slender, and straight; the lateral margins more or less dilated over the lower mandible; the Nostrils basal, with the opening sometimes concealed by the projecting plumes: the Wings long and pointed: the Tail of various lengths and forms: the Tarsi very short: the Toes more or less long; the outer toe united at its base; and the hind toe long, and armed usually with a long claw.

MELLISUGA *Briss.**

Bill of various lengths, straight and slender, with the culmen mostly rounded to the tip, which is acute, the lateral margins partly dilated over the lower mandible; the nostrils basal, with the opening entirely concealed by the projecting frontal plumes. *Wings* generally long and pointed, with the first quill the longest. *Tail* more or less lengthened, and of various forms. *Tarsi* very short, slender, and sometimes covered by plumes. *Toes* rather long, and slender; the lateral ones united at the base, especially the outer toe, which is longer than the inner one; the hind toe long, slender, and armed with a long curved claw.

The species of this genus are dispersed throughout the vast continent of the New World, and the adjacent islands that lie within a short distance of the coast. Some of them even brave the snow of the more northern and southern portions, as well as of the mountainous districts of the interior. The habits of the species vary in different localities; some are peculiar to the lowlands, and others again remain stationary on the mountains; while there are species that migrate from one to the other at certain seasons of the year. The habits of the North American species having been so admirably noticed by Wilson, I have been led to select from him the following remarks, especially as they are applicable to the species of the whole family. That author informs us that *Mellisuga colubris* is extremely fond of tubular flowers, before a series of which he poises or suspends himself on wing, for the space of two or three seconds, so steadily that his wings become invisible or only like a mist; and you can plainly distinguish the pupil of his eye looking round with great quickness and circumspection. When he alights, which is frequently, he always prefers the small dead twigs of a tree or bush, where he dresses and arranges his plumage with great dexterity. His only note is a single chirp, not louder than that of a small cricket or grasshopper, generally uttered while passing from flower to flower, or when engaged in fight with his fellows; for, when two males meet at the same bush or flower, a battle instantly takes place, and the combatants ascend in the air chirping, darting, and circling around each other, till the eye is no longer able to

* This genus was established by Brisson in 1760. It embraces *Cœligena* of M. Lesson (1829); *Les Rubis* of M. Lesson (1829), with which *Calliphlox* of M. Boie (1831) and *Selasphorus* of Mr. Swainson (1831) are coequal; *Lesbia* of M. Lesson (1829), with which *Cynanthus* of Mr. Swainson (1827) is synonymous; *Les Platures* of M. Lesson (1829); *Heliactin* of M. Boie (1831), with which *Les Queues étroites* of M. Lesson (1829) is equal; *Lophornis* of M. Lesson (1829), with which *Bellatrix* of M. Boie (1831) is synonymous; *Les Sephanoïdes* of M. Lesson (1829); *Orthorhynchus* of Cuvier (1799–1800), with which *Les Huppes* of M. Lesson (1829) and *Cephallepis* of the late Mr. Loddiges (1830) are synonymous. It also includes *Doryfera*, *Metallura*, and *Cometes* of Mr. Gould (1847).

follow them. The conqueror, however, generally returns to the place to reap the fruits of his victory. He has been seen to attack, and for a few moments tease, the king-bird; and has also, in his turn, been assailed by an humble bee, which he soon put to flight. The flight of this bird from flower to flower greatly resembles that of a bee; but is so much more rapid, that the latter appears a mere loiterer to him. It has generally been supposed that his food consists entirely of the honey, or liquid sweet, that is gathered from the flowers; but further observation, says Wilson, has given rise to the belief that he is rather in search of those minute insects that resort to feed on the farina of tubular flowers. Wilson also tells us that he has seen the bird, for half an hour at a time, darting at those little groups of insects that dance in the air on a fine summer's evening, retiring to an adjoining twig to rest, and renewing the attack with a dexterity that sets all other fly-catchers at defiance. This bird migrates at certain seasons, seeking, during the winter months, the warmer portions of that vast continent; and these migrations lead our author to remark that the wonder is excited how so feebly constructed and delicate a little creature can make its way over such extensive regions of lakes and forests, among so many enemies, all its superiors in strength and magnitude. But its very minuteness, the rapidity of its flight, which almost eludes the eye, and that admirable instinct, reason, or whatever else it may be called, and daring courage, which Heaven has implanted in its bosom, are its guides and protectors. The nest is usually affixed to a branch of a tree at a few feet from the ground, and is very small, composed outwardly of lichen, taken from the trunks of trees and palings, thickly glued on with the saliva of the bird, giving firmness and consistency to the whole, as well as keeping out moisture. Within this are thick matted layers of the fine wings of certain flying seeds, closely laid together; and, lastly, the downy substance from the great mullen and from the stalks of the common fern lines the whole; the base of the nest is continued round the stem of the branch, to which it closely adheres. The eggs are two in number, and the female raises two broods in the same season.

1. M. *ensifera* (Boiss.) Rev. Zool. 1839. p. 354., Mag. de Zool. 1840. Ois. t. 15.—Trochilus Derbyanus *Fras.*

2. M. *fulgens* (Swains.) Phil. Mag. 1827. p. 441.—Ornismya Rivolii *Less.* Ois. Mouch. t. 4., Nat. Libr. xv. pl. 18.

3. M. *Leadbeateri* (Bourc.) Ann. Sci. &c. de Lyon, 1843. p. 43. t. 5., Rev. Zool. 1843. p. 102.

4. M. *longirostris* (Vieill.) Ois. dor. t. 59., Pl. col. 299. f. 1., Less. Ois. Mouch. t. 2., Col. Suppl. t. 23., Troch. t. 34.—Trochilus superbus *Shaw*, Nat. Misc. pl. 517.

5. M. *melanoleuca* (Valenc.) Steph. Temm. Pl. col. 317.—Trochilus squamosus *Temm.* Pl. col. 203. f. 1.; Ornismya Temminckii *Less.* Ois. Mouch. t. 20. 29, 30., Troch. t. 45., Nat. Libr. xv. pl. 17.; T. mystacinus *Vieill. MSS.*

6. M. *helianthea* (Less.) Rev. Zool. 1838. p. 314.

7. M. *lutetiæ* (De Lattr. & Bourc.) Rev. Zool. 1846. p. 307.

8. M. *Bonapartei* (Boiss.) Rev. Zool. 1840. p. 6., Bourc. Ann. Sci. Phys. &c. de Lyon, 1842. p. 307. t. xiv.—Trochilus aurigaster *Lodd.*

9. M. *violifera* (Gould), Proc. Z. S. 1846. p. 87.

10. M. *Temminckii* (Boiss.) Rev. Zool. 1839. p. 354., Mag. de Zool. 1840. Ois. t. 14.—Trochilus cyanopterus *Lodd.*

11. M. *Prunellei* (Bourc.) Ann. Sci. Phys. &c. de Lyon, 1843. p. 36. t. 1.

12. M. *torquata* (Boiss.) Rev. Zool. 1840. p. 6.—Trochilus insectivorus *Tschudi*, Fauna Per. p. 248. t. 23. f. 1.

13. M. *Wilsoni* (De Lattr. & Bourc.) Rev. Zool. 1846. p. 305.

14. M. *Conradii* (Bourc.) Proc. Z. S. 1847. p. 45.

15. M. *cœligena* (Less.) Troch. t. 53., Nat. Libr. xv. pl. 4.

16. M. *Clemenciæ* (Less.) Ois. Mouch. t. 80., Col. Suppl. t. 8.—Type of Cœligena *Less.* (1829).

17. M. *Clarissæ* (Longuem.) Rev. Zool. 1841. p. 306., Mag. de Zool. 1842. Ois. t. 26.

18. M. *Parzudaki* (Less.) Rev. Zool. 1840. p. 72.

19. M. *Ludoviciæ* (Bourc. & Muls.) Ann. Sci. Phys. &c. Lyon, 1847. p. 136.—Type of Doryfera *Gould* (1847).

20. M. *Johannæ* (Bourc.) Proc. Z. S. 1847. p. 45.

21. M. *violifrons* (Gould), Proc. Z. S. 1847. p. 95.

22. M. *rubinea* (Lath.) Briss. Orn. iii. t. 37. f. 4., Pl. enl. 276. f. 4., Ois. Dor. t. 27, 28.—Trochilus obscurus *Gmel.*; T. ruficaudatus *Vieill.*

23. M. *rubinoïdes* (Bourc. & Muls.) Ann. Sci. Phys. &c. de Lyon, 1846. p. 322.

24. M. *Rhami* (Less.) Rev. Zool. 1838. p. 315.

25. M. *cupripennis* (Bourc. & Muls.) Rev. Zool. 1843. p. 71., Ann. Sci. &c. Lyon, 1843. p. 46.

26. M. *flavescens* (Lodd.) Proc. Z. S. 1832. p. 7.—Ornismya paradisea *Boiss.* Rev. Zool. 1840. p. 6.

27. M. *Matthewsii* (Lodd.) Proc. Z. S. 1847. p. 43.

28. M. *heteropogon* (Boiss.) Rev. Zool. 1839. p. 354., Mag. de Zool. 1840. Ois. t. 12.—Trochilus coruscus *Fras.*

29. M. *ruficeps* (Gould), Proc. Z. S. 1846. p. 89.

30. M. *Guerini* (Boiss.) Rev. Zool. 1840. p. 7.—Trochilus parvirostris *Fras.*

31. M. *Lindenii* (Parz.) Rev. Zool. 1845. p. 253.

32. M. *microrhyncha* (Boiss.) Rev. Zool. 1839. p. 356., Mag. de Zool. 1840. Ois. t. 16.—Trochilus brachyrhynchus *Fras.*

33. M. *Sabinæ* (Bourc. & Muls.) Ann. Sci. Phys. &c. de Lyon, 1846. p. 323.

34. M. *inornata* (Gould), Proc. Z. S. 1846. p. 89.

35. M. *melanogenys* (Fras.) Proc. Z. S. 1840. p. 18.

36. M. *tyrianthinus* (Lodd.) Proc. Z. S. 1832. p. 6.—Ornismya Allardi *Bourc.* Rev. Zool. 1839. p. 294., Ann. Sci. Phys. &c. de Lyon, 1840. p. 226. t. 3, 4.; Ornismya Paulinæ *Boiss.* Rev. Zool. 1839. p. 354., Mag. de Zool. 1840. t. 13.

37. M. *Abeillei* (De Lattr. & Less.) Rev. Zool. 1839. p. 16.

38. M. *Williami* (De Lattr. & Bourc.) Rev. Zool. 1846. p. 308.

39. M. *strophiuna* (Gould), Proc. Z. S. 1846. p. 45.

40. M. *amethysticollis* (D'Orb. & Lafr.) Syn. Av. p. 31., (Mag. de Zool.), Voy. dans l'Amér. Mér. t. 60. f. 2.

41. M. *Spencei* (Bourc.) Proc. Z. S. 1847. p. 46.

42. M. *smaragdinicollis* (D'Orb. & Lafr.) Voy. dans l'Amér. Mér. Ois. t. 59. f. 2.

43. M. *cupreocauda* (Gould), Proc. Z. S. 1846. p. 87.—Type of Metallura *Gould* (1847).

44. M. *aeneocauda* (Gould), Proc. Z. S. 1846. p. 87.

45. M. *Phœbe* (Less. & De Lattr.) Rev. Zool. 1839. p. 17.

46. M. *sparganura* (Shaw), Gen. Zool. viii. p. 291. pl. 39*.—Trochilus chrysurus *Cuv.*; T. radiosus *Temm. MSS.*; Ornismya Sapho *Less.*, Ois. Mouch. t. 27, 28., Troch. t. 49., Nat. Libr. xv. pl. 23.; Type of Cometes *Gould* (1847).

47. M. *Phaon* (Gould), Proc. Z. S. 1847. p. 31.

48. M. *bifurcata* (Swains.) Ann. Phil. 1827. p. 441.—Ornismya Nuna *Less.* Ois. Mouch. Suppl. t. 35.

49. M. *forficata* (Linn.) Edwards's Birds, pl. 33., Nat. Misc. pl. 22., Ois. dor. t. 60.—Ornismya Kingii *Less.* Troch. t. 38.; Type of Lesbia *Less.* (1829).

50. ? M. *cyanura* (Steph.) Gen. Zool. xiii. p. 239.—Blue forked-tailed Humming-bird *Lath.* Hist. of B. iv. p. 299.; Trochilus bipartitus *Lath. MSS.*

51. M. *Gouldii* (Lodd.) Proc. Z. S. 1832. p. 7.—Ornismya silphia *Less.* Rev. Zool. 1840. p. 73.

52. M. *smaragdinis* (Gould), Proc. Z. S. 1846. p. 85.—Trochilus mocoa *De Lattr. & Bourc.* Rev. Zool. 1846. p. 311.

53. M. *gracilis* (Gould), Proc. Z. S. 1846. p. 86.

54. M. *Victoriæ* (Bourc. & Muls.) Rev. Zool. 1846. p. 315. t. 4.

55. M. *longicauda* (Gmel.) Ois. dor. t. 52., Less. Ois. Mouch. t. 40.—Trochilus platurus *Lath.*; Type of Platures *Less.* (1829).

56. M. *Underwoodii* (Less.) Troch. t. 37., Nat. Libr. xv. pl. 22.—Fan-tailed Humming-bird *Lath.* Hist. of B. iv. p. 339.; Trochilus ventilabrum *Lath. MSS.*

57. M. *ligonicauda* (Gould), Proc. Z. S. 1846. p. 86.

58. M. *mirabilis* (Lodd.) Proc. Z. S. 1847. p. 42.

59. M. *rufocaligata* (Gould), Proc. Z. S. 1846. p. 86.—Trochilus Addæ *Bourc.* Rev. Zool. 1846. p.

60. M. *rubra* (Linn.) Steph. Edwards's Birds, pl. 32.—Trochilus rufus *Gmel.* Lath. Gen. Syn. ii. pl. 35., Ois. dor. t. 61, 62., Less. Ois. Mouch. t. 66, 67., Suppl. t. 11, 12, 13., Troch. t. 43., Nat. Libr. xv. pl. 11.; T. collaris *Lath.*; Ornismya sasin *Less.*; T. sithensis *Rathke*; Type of Selasphorus *Swains.* (1831).

61. M. *Anna* (Less.) Ois. Mouch. t. 74., Nat. Libr. xiv. pl. 6.—Trochilus icterocephalus *Nutt.*

62. M. *Heloisa* (Less. & De Lattr.) Rev. Zool. 1839. p. 15.

63. M. *Mulsanti* (Bourc.) Ann. Sci. Phys. &c. de Lyon. 1842. p. 344. t. xx.

64. M. *rosæ* (Bourc. & Muls.) Ann. Sci. Phys. &c. de Lyon, 1846. p. 316.

65. M. *Jourdani* (Bourc.) Rev. Zool. 1839. p. 295., Ann. Sci. Phys. &c. de Lyon, 1840. p. 227. t. 5, 6.

66. M. *Heliodori* (Bourc.) Rev. Zool. 1840. p. 275., Ann. Sci. Phys. &c. de Lyon, 1842. p. 308. t. 15, 16.

67. M. *cornuta* (Pr. Max.)—Trochilus dilophus *Vieill.*; T. bilophus *Temm.*, Pl. col. 18. f. 3.; Ornismya chrysolopha *Less.* Ois. Mouch. t. 7, 8., Suppl. t. 32.; Nat. Libr. xiv. pl. 21, 22.; Type of Heliactin *Boie* (1831).

68. M. *Langsdorffii* (Vieill.) Ency. Méth. p. 574., Pl. col. 66. f. 1., Less. Ois. Mouch. t. 26., Suppl. t. 16., Troch. t. 35. 60., Nat. Libr. xv. pl. 10.—Colibri hirundinaceus *Spix*, Av. Bras. t. 81. f. 2.

69. M. *Conversii* (Bourc. & Muls.) Rev. Zool. 1846. p. 314. t. 3., Ann. Sci. Phys. &c. Lyon, 1846. p. 313.

70. M. *Popelairii* (Dubus), Esquisses Ornith. t. 6.

71. M. *Dupontii* (Less.) Col. t. 1., Nat. Libr. xiv. pl. 26.—Ornismya Xemes *Less.* Rev. Zool. 1838. p. 315.; Or. cœlestis *Less.*

72. M. *amethystina* (Gmel.) Pl. enl. 672. f. 1., Less. Ois. Mouch. t. 47., Suppl. t. 20, 21, 22., Troch. t. 52., Nat. Libr. xv. pl. 9.

73. M. *amethystoïdes* (Less.) Troch. t. 25, 26, 27. 30.

74. M. *Mitchellii* (Bourc.) Proc. Z. S. 1847. p. 47.

75. M. *exortis* (Fras.) Proc. Z. S. 1840. p. 14.

76. M. *orthura* (Less.) Troch. t. 28, 29., Nat. Libr. xv. pl. 8.

77. M. *montana* (Less.) Troch. t. 63.

78. M. *platycerca* (Swains.) Ann. Phil. 1827. p. 441.—Ornismya tricolor *Less.* Ois. Mouch. Suppl. t. 14., Nat. Libr. xv. pl. 13.

79. M. *minima* (Sw.) Ann. Phil. 1827. p. 441.

80. M. *Alexandri* (Bourc. & Muls.) Ann. Sci. Phys. &c. de Lyon, 1846. p. 330.

81. M. *Gibsoni* (Lodd.) Proc. Z. S. 1840. p. 17.

82. M. *colubris* (Linn.) Steph. Edwards's Birds, pl. 38., Wils. Amer. Orn. pl. 10. f. 34., Ois. dor. t. 31, 32, 33., Less. Ois. Mouch. t. 48. 48*, Troch. t. 1., Nat. Libr. xiv. pl. 5.—Type of Cynanthus *Swains.* (1827).

83. M. *Costæ* (Bourc.) Rev. Zool. 1839. p. 294., Ann. Sci. Phys. &c. de Lyon, 1840. p. 225. t. 2., Voy. de la Vénus, t. 2.

84. M. *ornata* (Bodd.) Steph. Pl. enl. 640. f. 3., Ois. dor. t. 49, 50, 51., Less. Ois. Mouch. t. 41., Troch. t. 24., Nat. Libr. xiv. pl. 15, 16.—Trochilus auratus *Gmel.*; Type of Lophornis *Less.* (1829).

85. M. *De Lattrei* (Less.) Rev. Zool. 1839. p. 19.

86. M. *Helenæ* (De Lattr.) Rev. Zool. 1843. p. 133.

87. M. *Gouldii* (Less.) Troch. t. 36., Nat. Libr. x. pl. 12.

88. M. *magnifica* (Vieill.) Steph. N. Dict. d'Hist. Nat. Pl. col. 299. f. 2.—Trochilus decorus *Licht.*; Ornismya strumaria *Less.* Ois. Mouch. t. 42, 43.; Colibri Helios *Spix*, Av. Bras. t. 82. f. 2, Nat. Libr. xiv. pl. 19, 20.

89. M. *Audenetii* (Less.) Ois. Mouch. Suppl. t. 2., Nat. Libr. xiv. pl. 17.—Colibri mystax *Spix*, Av. Bras. t. 82. f. 3.

90. M. *chalybea* (Vieill.) Steph. N. Dict. d'Hist. Nat. Pl. col. 66. f. 2.—Trochilus festivus *Licht.*; Ornismya Vieillotii *Less.* Ois. Mouch. t. 64., Troch. t. 8, 9, 10, 11., Nat. Libr. xiv. pl. 18.

91. M. *regulus* (Gould), Proc. Z. S. 1846. p. 89.

92. M. *reginæ* (Gould), Proc. Z. S. 1847. p. 95.

93. M. *galerita* (Mol.)—Orthorhynchus Kingii *Vigors*; Orthorhynchus sephanoïdes *Less. & Garn.*, Voy. de la Coqu. Ois. t. 31. f. 2., Ois. Mouch. t. 14., Suppl. t. 5., Nat. Libr. xiv. pl. 12.; Trochilus flammifrons *Lyell*; Type of Sephanoïdes *Less.* (1829).

94. M. *Stokesii* (King), Proc. Z. S. 1831. p. 30., Less. Troch. t. 50., Nat. Libr. xv. pl. 5.

95. M. *Fernandensis* (King), Proc. Z. S. 1831. p. 30.—Ornismya cinnamomea *Gerv.* Mag. de Zool. 1835. Ois. t. 43.; Or. Robinson *Less.*

96. M. *moschita* (Linn.) Steph. Briss. Orn. iii. t. 37. f. 1. Pl. enl. 227. f. 2., Ois. dor. t. 29, 30. 54, 55, 56., Swains. B. of Braz. pl. 30., Less. Ois. Mouch. t. 52, 53., Nat. Libr. xiv. pl. 11.—Trochilus elatus *Linn.* Edwards's Birds, pl. 344. f. 2., Pl. enl. 640. f. 1.; T. pegasus *Linn.*; T. guianensis *Gmel.*; T. carbunculus *Gmel.*; Type of Chrysolampis *Boie* (1831).

97. M. *cristata* (Linn.) Steph. Edwards's Birds, pl. 37., Briss. Orn. iii. t. 37. f. 2. Pl. enl. 227. f. 1., Swains. B. of Braz. pl. 21., Ois. dor. t. 47, 48.—Type of Orthorhynchus *Cuv.* (1799–1800).

98. M. *exilis* (Gmel.) Ois. dor. t. 63., Less. Troch. t. 4.—Trochilus puniceus *Gmel.*; T. pileatus *Lath.*; T. cristatellus *Lath.* ?

99. M. *Delalandii* (Vieill.) Steph. Pl. col. 18. f. 1, 2., Less. Ois. Mouch. t. 23, 24., Swains. B. of Braz. pl. 22., Nat. Libr. xiv. pl. 10. xv. pl. 7. — Trochilus versicolor *Vieill.*

100. M. *Loddigesii* (Gould), Proc. Z. S. 1830. p. 12., Less. Troch. t. 51., Nat. Libr. xv. pl. 6. — Trochilus opisthocomus *Licht.*, Ermann, Verz. von Thier. und Pflanz. p. 6. t. 2. f. 3.

101. M. *melanolopha* (Vieill.) Ency. Méth. p. 574.

Hylocharis *Boie.**

Bill more or less long, straight and slender, with the culmen rounded, the lateral margins dilated over the lower mandible, and the tip slightly curved and acute; the nostrils basal, with the opening covered by a large scale, which is partly concealed by the frontal plumes. *Wings* long and pointed, with the first quill the longest. *Tail* more or less long, and forked or rounded. *Tarsi* very short, and slender. *Toes* long and slender; the lateral ones united at their base, especially the outer, which is longer than the inner; the hind toe long, slender, and armed with a curved claw.

The species of this division are found in the central and warmer parts of America.

1. H. *gigas* (Vieill.) Gal. des Ois. t. 180. — Ornismya tristis *Less.* Ois. Mouch. t. 3., Nat. Libr. xv. pl. 3.; Orn. giganteus *D'Orb. & Lafr.*; Type of Patagona *G. R. Gray* (1840).

2. H. *vestita* (Longuem.) Rev. Zool. 1838. p. 314. 1839. p. 18. 1840. p. 8. — Trochilus uropygialis *Fras.*; Ornismya glomata *Less.*; Type of Eriopus *Gould* (1847).

3. H. *cupreoventris* (Fras.) Proc. Z. S. 1840. p. 40. — Ornismya maniculata *Less.*

4. H. *Luciani* (Bourc.) Ann. Sci. Phys. &c. de Lyon, 1847. p. 624.

5. H. *mosquera* (Bourc. & De Lattr.) Rev. Zool. 1846. p. 306.

6. H. *Aline* (Bourc.) Rev. Zool. 1842. p. 373., Ann. Sci. Phys. &c. de Lyon, 1842. p. 344. t. 19.

7. H. *Derbyi* (Bourc. & De Lattr.) Rev. Zool. 1846. p. 306.

8. H. *Aureliæ* (Bourc. & Muls.) Ann. Sci. Phys. &c. de Lyon, 1846. p. 315. t.

9. H. *Isaacsoni* (Lafr.) Rev. Zool. 1845. p. 95.

10. H. *D'Orbignyi* (Bourc. & Muls.) Ann. Sci. &c. de Lyon, 1846. p. 320.

11. H. *recurvirostris* (Swains.) Zool. Illustr. pl. 105., Less. Ois. Mouch. t. 37., Ois. Mouch. Suppl. t. 34., Nat. Libr. xiv. pl. 3.

12. H. *avocetta* (Less.) Col. Suppl. t. 24., Troch. t. 23., Nat. Libr. xiv. pl. 2. — Type of Avocettes *Less.* (1829).

13. H. *Pamela* (D'Orb. & Lafr.) Voy. dans l'Amér. Mér. Ois. t. 60. f. 1.

14. H. *Wagleri* (Less.) Ois. Mouch. t. 73., Ois. dor. t. 57., Nat. Libr. xv. pl. 16. — Trochilus sapphirinus *Vieill.*

15. H. *albirostris* (Vieill.) Ois. dor. t. 45.

16. H. *nigra* (Linn.) Briss. Orn. iii. t. 36. f. 8., Ois. dor. t. 53. — Trochilus Vieilloti *Shaw*; Ornismya minima *Less.*, Ois. Mouch. t. 79.; Trochilus humilis *Gosse.*

17. H. *ourissia* (Linn.) Pl. enl. 227. f. 3., Edwards's Birds, pl. 35. f. 2. — Trochilus mangæus *Vieill.* Ois. dor. t. 37, 38., Less. Ois. Mouch. t. 68, 69; T. tobaci *Gmel.?*; T. tobagensis *Lath.?*

18. H. *elegans* (Vieill.) Ois. dor. t. 14. — Ornismya Swainsoni *Less.* Ois. Mouch. t. 70.

19. H. *Caniveti* (Less.) Ois. Mouch. Suppl. t. 37, 38.

20. H. *Fannyi* (Bourc. & De Lattr.) Rev. Zool. 1846. p. 310.

21. H. *angustipennis* (Fras.) Proc. Z. S. 1840. p. 18.

22. H. *Lessoni* (De Lattr.) Rev. Zool. 1839. p. 15.

23. H. *Ricordi* (Gerv.) Mag. de Zool. 1835. Ois. t. 41, 42.

24. H. *Juliæ* (Bourc.) Ann. Sci. Phys. &c. Lyon, 1843. p. 345. t. 21.

25. H. *Azaræ* (Vieill.) N. Dict. d'Hist. Nat. vii. p. 347. — Azara, No. 297.

26. H. *fuscicaudata* (Fras.) Proc. Z. S. 1840. p. 17.

27. H. *feliciana* (Less.) Rev. Zool. 1844. p. 433.

28. H. *leucotis* (Vieill.) N. Dict. d'Hist. Nat. xxiii. p. 428. — Trochilus leucocrotaphus *Shaw*; T. melanotis *Swains.*; Ornismya Arsenii *Less.* Ois. Mouch. t. 9., Suppl. t. 27., Nat. Libr. xiv. pl. 29., Azara, No. 289.

29. H. *superba* (Vieill.) Encyc. Méth. p. 561. — Trochilus scutatus *Temm.* Pl. col. 299. f. 3.; Ornismya Nattereri *Less.* Ois. Mouch. t. 16., Nat. Libr. xiv. pl. 14.

30. H. *Lumachellus* (Less.) Rev. Zool. 1838. p. 315, 1846. p. 313.

31. H. *cyanea* (Vieill.) N. Dict. d'Hist. Nat. xxiii. p. 426., Less. Ois. Mouch. t. 71., Suppl. t. 23., Nat. Libr. xiv. pl. 7.

32. H. *Doubledayi* (Bourc.) Proc. Z. S. 1847. p. 46.

33. H. *Guimeti* (Bourc. & Muls.) Ann. Sci. Phys. &c. Lyon, 1843. p. 38. t. 2.

34. H. *cærulea* (Vieill.) Ois. dor. t. 40. — Ornismya Audebertii *Less.* Ois. Mouch. t. 51., Ann. Sci. Phys. &c. Lyon, 1842. t.

35. H. *bicolor* (Gmel.) Ois. dor. t. 36., Less. Ois. Mouch. t. 49, 50., Troch. t. 16. — Trochilus smaragdo-sapphirinus *Shaw*; T.

* M. Boie established the above genus in 1831 (*Isis*, 1831, p. 546.). *Les Saphirs* of M. Lesson (1829) are synonymous. It embraces *Patagona* of G. R. Gray (1840), which is the *Les Patagons* of M. Lesson (1829), *Eriopus* of Mr. Gould (1847), *Les Avocettes* and *Les Chrysures* of M. Lesson (1829).

azureus *Licht.*; Azara, No. 293.?; T. splendidus *Vieill.*?; T. lucidus *Shaw.*

36. H. *sapphirina* (Gmel.) Boie, Ois. dor. t. 35. 58., Less. Ois. Mouch. t. 55. 57., Troch. t. 15., Nat. Libr. xiv. pl. 28. — Trochilus fulvifrons *Lath.*?; Type of Hylocharis *Boie* (1831).

37. H. *lactea* (Less.) Ois. Mouch. t. 56.

38. H. *Grayii* (De Lattr. & Bourc.) Rev. Zool. 1846. p. 307.

39. H. *simila* (Bourc.).

40. H. *cyanogenys* (Pr. Max.) Edwards's Birds, pl. 360. f. 1. — Trochilus viridissimus var. β. *Lath.*; Ornismya Wiedii *Less.* Ois. Mouch. Suppl. t. 26.

41. H. *viridigaster* (Bourc.) Rev. Zool. 1843. p. 103., Ann. Sci. Phys. &c. Lyon, 1843. p. 42.

42. H. *Mariæ* (Bourc. & Muls.) Ann. Sci. &c. de Lyon, 184 . p. .

43. H. *chrysogaster* (Bourc.) Rev. Zool. 1843. p. 101., Ann. Sci. Phys. &c. Lyon, 1843. p. 40.

44. H. *Caroli* (Bourc.) Proc. Z. S. 1847. p. 48.

45. H. *versicolor* (Licht.) Erman, Verz. von Thier und Pflanz. p. 3. t. 1. f. 1, 2, 3.

46. H. *prasina* (Less.) Ois. Mouch. t 65., Nat. Libr. xiv. pl. 8.

47. H. *atala* (Less.) Troch. t. 42.

48. H. *Portmanni* (Bourc.) Rev. Zool. 1843. p. 2., Ann. Sci. Phys. &c. de Lyon, 1843. p. 39.

49. H.? *cyanocephala* (Mol.).

Heliothrix *Boie.**

Bill rather long, stout and straight, with the culmen keeled, the sides sloping, and much compressed for one third of its length from the tip, which is acute; the gonys long, and very slightly advancing upwards to the tip; the nostrils basal, and concealed by the frontal plumes. *Wings* long and pointed, with the first quill the longest. *Tail* long, broad, and truncated, with the sides rounded. *Tarsi* very short, and slender. *Toes* long and slender, with the lateral ones united at the base, especially the outer toe, which is longer than the inner; the hind toe long, slender, and armed with a short curved claw.

The species are inhabitants of the central and warmer portions of America.

1. H. *auritus* (Gmel.) Briss. Orn. iii. t. 37. f. 3., Ois. dor. t. 25, 26., Shaw, Nat. Misc. pl. 977., Less. Ois. Mouch. t. 10., Swains. B. of Braz. pl. 29.

2. H. *nigrotis* (Less.) Ois. Mouch. t. 11.

3 H. *auriculatus* (Licht.) Erman, Verz. von Thier, und Pflanz. p. 5. t. 2. f. 1, 2. — Ornismya Pouchetii *Less.* Zool. (1841.) p. 72.

4. H. *Barroti* (Bourc.) Rev. Zool. 1843. p. 72., Ann. Sci. Phys. &c. Lyon, 1843. p. 48. t. 4.

* This division was originally established under the French name of *Les Jacobines*, by M. Lesson, in 1829; but I have adopted the above name, proposed by M. Boie in 1831, as more appropriate as a generic name.

December, 1848.

MALCOLM SON TESTIMONIAL

MYZOMELA
chermesina. G.R.Gray.

Bulmer and Walton Lithographers

MELITHREPTINÆ.

Hanhart imp. & Walton Litho-graphers

1. MYZOMELA nigra. 2. GLYCIPHILA melanops. 3. ACANTHORHYNCHUS tenuirostris. 4. ENTOMOPHILA picta.
5. MELITHREPTUS lunulatus. 6. PSOPHODES crepitans. 7. MANORHINA garrula.

The fourth Family,

MELIPHAGIDÆ, or HONEY-EATERS,

have the Bill more or less long, curved, and usually acute at the tip, which is slightly emarginated; the Nostrils placed in a large groove, and generally covered with a membranous scale; the Wings moderate, and the first three quills graduated; the Tail long and broad; the Tarsi rather short and strong; and the Toes more or less long, the outer always united at its base. The Tongue is extensile, and furnished at the tip with a pencil of short slender fibres.

The first Subfamily,

MYZOMELINÆ, or HONEY-CREEPERS,

have the Bill more or less long, slender, curved, and acute at the tip, which is slightly emarginated; the nostrils basal, and the opening covered by a membranous scale; the Wings rather short, with the third and fourth quills usually the longest; the Tail short and even; the Tarsi short; and the Toes moderate, the outer toe longer than the inner, and united at the base.

MYZOMELA *Vig. & Horsf.**

Bill rather long, curved, broad at the base, and gradually compressed to the tip, which is acute; the culmen rather keeled, and the gonys long and curved; the nostrils basal, with the opening linear, oblique, and covered by a membranous scale. *Wings* moderate, with the first quill short, the second rather shorter than the third and fourth, which are equal and longest. *Tail* rather short and emarginated. *Tarsi* slender, rather shorter than the middle toe, and covered with transverse scales in front. *Toes* moderate and slender, with the outer toe rather longer than the inner, and united at its base; the hind toe long, and rather strong: the claws long, compressed, and acute.

The species of this genus are found in Australia and in the Island of Tanna, frequenting various plants, from the flowers of which they collect the nectar, but principally the small insects that are found in them, as well as on the thickly foliaged branches. They possess great activity; and are continually moving from flower to flower, as well as from branch to branch, in search of their subsistence. At times they are seen perched on a dead branch, pouring forth a weak plaintive note. The nest is composed of grasses, wherein the female deposits two eggs.

* Vigors and Dr. Horsfield established this genus in 1826 (*Linn. Trans.* xv. p. 316.). *Phylidonyris* of M. Lesson (1831) is synonymous.

1. M. *sanguinolenta* (Lath.) Lamb. Icon. ined. ii. 78. — Certhia dibapha *Lath.* Lamb. Icon. ined. ii. 70.; C. australasiæ *Leach*, Zool. Misc. pl. ix.; Meliphaga cardinalis *Vig. & Horsf.* Gould, B. of Austr. pl.; Cinnyris rubrater *Less.* Kittl. Küpf. t. 8. f. 1.
2. M. *erythrocephala* Gould, Proc. Z. S. 1839. p. 144., B. of Austr. pl.
3. M. *pectoralis* Gould, Proc. Z. S. 1840. p. 170., B. of Austr. pl.
4. M. *obscura* Gould, Proc. Z. S. 1842. p. 136., B. of Austr. pl.
5. M. *nigra* Gould, B. of Austr. pl.
6. M. *guttata* (Vieill.) Vieill. Ois. dor. t. 59.
7. M. ———, Voy. au Pole Sud, Ois. t. 22. f. 5.
8. M. ———, Voy. au Pole Sud, Ois. t. 22. f. 6.
9. M. ? *sanguinea* (Gmel.).
10. M. *chermesina* G. R. Gray.

Entomophila *Gould.**

Bill moderate, broad at the base, with the culmen and lateral margins curved, and the sides compressed to the tip, which is slightly emarginated; the gonys straight or curved; the nostrils basal, with the opening lunate and anterior in the membranous space. *Wings* long and pointed, with the first quill very short, the second nearly as long as the third and fourth, which are equal and longest. *Tail* moderate and even. *Tarsi* short, as long as the middle toe, and covered in front with broad transverse scales. *Toes* moderate and slender, with the outer toe rather longer than the inner, and united at its base; the claws moderate, compressed, and acute.

It is in various parts of Australia that the species of this genus are found. They frequent both the extensive plains and the swampy situations; and are usually seen perched on the branches, now and then darting forth after passing insects, and then generally returning to the spot they have just left. While on the wing they often spread out their tail, and occasionally chase each other above the tops of the high trees, uttering a loud melodious note which is sometimes changed to a chattering noise. It is remarked of one species, that it congregates in large flocks, which soar high in the air, during most parts of the day. The nest is pendulous from the tip of a branch, and is partly hidden by the leaves of the Acacia. It is mostly formed of fine fibrous roots, with the entrance at the top. The eggs are generally two in number.

1. E. *picta* Gould, Proc. Z. S. 1837. p. 154., Syn. B. of Austr. pl. (head), B. of Austr. pl.
2. E. ? *albigularis* Gould, Proc. Z. S. 1842. p. 137., B. of Austr. pl.
3. E. ? *rufigularis* Gould, Proc. Z. S. 1842. p. 137., B. of Austr. pl.
4. E. *picata* (Gould), B. of Austr. pl. — Type of Melicophila *Gould* (1844).

Glyciphila *Swains.*†

Bill rather long, more or less slender and curved, with the culmen and the lateral margins curved, and the sides compressed to the tip, which is slightly emarginated and acute; the gonys long and curved; the nostrils basal, and placed in a large groove, with the opening linear, and closed by a membranous scale. *Wings* rather short, with the first quill half the length of the second; the third, fourth, and fifth, equal and longest. *Tail* moderate and emarginated. *Tarsi* longer than the middle toe, and covered in front with broad transverse scales. *Toes* short, with the outer longer than the

* Established in 1837 by Mr. Gould (*Proc. Zool. Soc.* 1837. p. 154.). It embraces *Melicophila* of the same author (1844).
† This genus was established by Mr. Swainson (1837) in his *Classif. of Birds*, ii. p. 326.

inner, and united at the base; the hind toe rather long and robust: the claws short, curved, and acute.

The species are peculiar to the continent of Australia, where they frequent the various species of Eucalypti, for the purpose of procuring the nectar of the flowers, and the small insects that are attracted for the same object. During this occupation, these birds are observed clinging and hanging from the slender flowering branches in a variety of attitudes. Their flight is rapid, and usually at some height in the air. The nest is placed in a low bush, and is composed of grasses, and lined with the soft materials of plants. The eggs are generally two in number.

1. G. *melanops* (Lath.) Lamb. Icon. ined. ii. 59. 61., Vieill. Ois. dor. i. 86. — Certhia fulvifrons *Lewin*, B. of N. H. pl. 22.; Meliphaga albiventris *Steph.* Gould, B. of Austr. pl.
2. G. *albifrons* Gould. Proc. Z. S. 1840. p. 160., B. of Austr. pl.
3. G. *fasciata* Gould, Proc. Z. S. 1842. p. 137., B. of Austr. pl.
4. G. ? *ocularis* Gould, Proc. Z. S. 1837. p. 154.
5. G. *subocularis* Gould, Proc. Z. S. 1837. p. 154.
6. G. *aurita* (Lath.) Lamb. Icon. iii. 44.
7. G. *agilis* (Lath.) Lamb. Icon. ined. ii. 72.

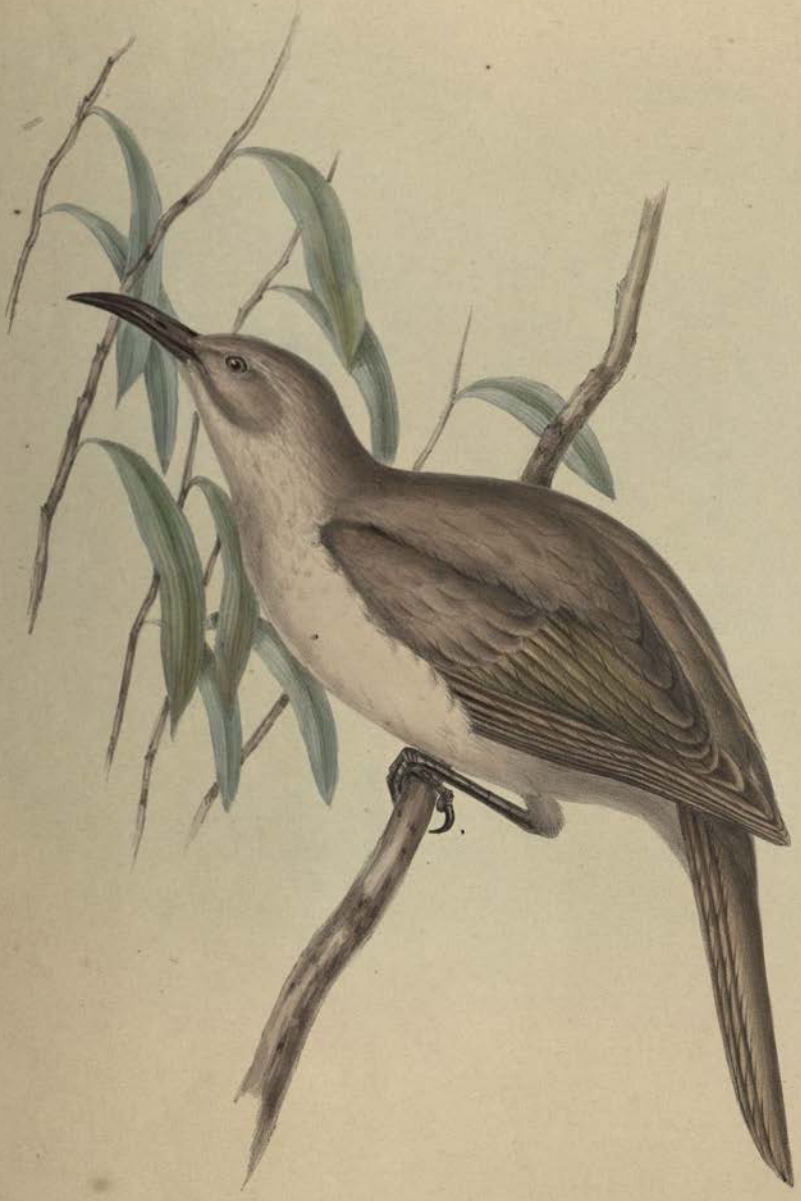
ACANTHORHYNCHUS *Gould.**

Bill very long, slender, and curved, with the tips of both mandibles very acute; the sides much compressed, and the gonys lengthened and curved; the nostrils basal, and placed in a large groove, with the opening linear, and covered with a membranous scale. *Wings* rather short, with the first quill short, and the fourth and fifth nearly equal and longest. *Tail* moderate, emarginated in the middle, and rounded on the sides. *Tarsi* rather longer than the middle toe, slender, and covered with transverse scales. *Toes* long and slender, with the outer longer than the inner, and united at the base; the hind toe long: the claws moderate, curved, and acute.

It is only in Australia that the species are found, where they frequent various flowering plants, especially those of the genera Epacris, Acacia, and Eucalyptus. They appear to be attracted to the flowers of these plants both for the nectar and for the insects that live in them. Their flight is rapid and undulating, but of short duration, and they occasionally rise perpendicularly into the air, uttering at the same time a rather pretty song, though at other times their cry consists of a loud monotonous shriek. The nest is formed in a low bush, and is composed of moss and grass, and lined with feathers. The eggs are generally two in number.

1. A. *tenuirostris* (Lath.) Gould, Lamb. Icon. ined. ii. 80., Vieill. Ois. dor. t. 60. — Certhia cucullata *Shaw*, Gould, B. of Austr. pl.; Acanthorhynchus dubius *Gould*, Proc. Z. S. 1837. p. 25.
2. A. *superciliosus* Gould, Proc. Z. S. 1837. p. 24., B. of Austr. pl.

* Mr. Gould established this genus in 1837 (*Proc. Zool. Soc.* 1837. p. 24.). *Leptoglossus* (1837) of Mr. Swainson is coequal.



Hullmandel & Walton Lithographers.

TROPIDORHYNCHUS
incornatus G.R. Gray.

Hullmandel & Walton lithographers

1. MELIPHAGA carunculata. 2. ANTHOCHERA lunulata. 3. POSTHEMADERA Novæ-Zealandiæ. 4. POGONORNIS cincta.
5. ANTHORNIS melanura. 6. PHYLLORNIS aurifrons. 7. TROPIDORHYNCHUS corniculatus.

The second Subfamily,

MELIPHAGINÆ, or HONEY-EATERS,

have the Bill more or less long and slender, with the tip slightly emarginated, and usually acute; the Wings moderate and rounded, with the fourth to the sixth quills generally the longest; the Tarsi generally short and strong; the Toes moderate, with the outer toe longer than the inner, and united at its base; the hind toe long and strong: the claws moderate, curved, and acute.

MELIPHAGA *Lewin.**

Bill long, rather slender, broad and elevated at the base, with the culmen and lateral margins curved, and the sides compressed to the tip, which is slightly emarginated and acute; the gonys long and curved; the nostrils basal, large, in a broad membranous groove, and the opening covered by a prominent membranous scale. *Wings* moderate, with the first quill short, the second much shorter than the third, which is rather shorter than the fourth and fifth; these are equal and longest. *Tail* rather long, broad, slightly emarginated in the middle, and graduated on the sides. *Tarsi* as long as, or longer than, the middle toe, and covered in front with transverse scales. *Toes* moderate, with the inner toe shorter than the outer, which is united at its base: the claws long, slender, curved, and very acute.

The vast continent of Australia contains most of the species of this genus, though a few have been discovered on the islands that lie off its northern side. Wherever the Eucalypti and the Banksias are seen in flower, there are found these birds seeking their principal food, which consists of the pollen and juices that abound in the flowers of those trees. They also feed on the small insects that lie concealed in them, and the fruits and berries of various kinds of plants. Their movements among the branches are very active, and at the same time accompanied with a series of graceful and easy motions; and their rapid and jerking flight is only extended from tree to tree. The note of these birds consists of a loud shrill whistling noise, which however is rather melodious in some species. The nest is usually built in some low tree or bush. It is composed of small twigs, coarse grass, moss, and strips of bark, lined interiorly with soft materials principally derived from plants. The eggs are generally two or three in number.

1. M. *phrygia* (Lath.) Lewin, B. of N. H. pl. 14., Le Vaill. Ois. d'Afr. t. 116., B. of Austr. pl.

2. M. *auricomis* (Lath.) Vieill. Ois. dor. t. 85. — Philemon erythrotis *Vieill.*; Certhia auriculata *Shaw*; Sylvia mystacea *Lath.* Lamb. Icon. ined. ii. 60.; Turdus melanops *Lath.*; Muscicapa novæ hollandiæ *Lath.* Lamb. Icon. ined. ii. 40., Swains. Zool. Ill. pl. 43.; Type of Ptilotis *Swains.* (1837).

3. M. *chrysotis* (Lath.) Lamb. Icon. ined. ii. 68., Vieill. Ois. dor. t. 84. — Certhia xanthotis *Shaw*, Gould, B. of Austr. pl.

* Established by Lewin in 1808 (*Birds of New Holland*). It contains *Zanthomyza* and *Ptilotis* of Mr. Swainson (1837), the former name Mr. Strickland changed to *Xanthomyza* in 1841; *Meliornis* of G. R. Gray (1840), which is probably coequal with *Strigiceps* of M. Lesson (1840); and *Acanthogenys* of Mr. Gould (1837).

4. M. *Lewinii* Swains. — Meliphaga chrysotis *Lewin*, B. of N. H. pl. 5.

5. M. *chrysops* (Lath.) Lamb. Icon. ined. ii. t. 46., Jard. & Selby, Ill. Ornith. pl. 35. f. 1., B. of Austr. pl.

6. M. *leucotis* (Lath.) Gould, Syn. B. of Austr. pl., B. of Austr. pl., Pl. col. 435., Jard. & Selby, Ill. Orn. pl. 35. f. 2., Voy. de l'Astrol. Ois. t. 8. f. 1.

7. M. *flava* Gould, Proc. Z. S. 1842. p. 136., B. of Austr. pl.

8. M. *unicolor* Gould, Proc. Z. S. 1842. p. 136., B. of Austr. pl.

9. M. *fusca* Gould, Syn. B. of Austr. pl. f., B. of Austr. pl.

10. M. *ornata* Gould, Proc. Z. S. 1838. p. 24., B. of Austr. pl.

11. M. *plumula* Gould, Proc. Z. S. 1840. p. 150., B. of Austr. pl.

12. M. *sonora* Gould, Proc. Z. S. 1840. p. 160., B. of Austr. pl.

13. M. *cratitia* Gould, Proc. Z. S. 1840. p. 160., B. of Austr. pl.

14. M. *penicillata* Gould, Proc. Z. S. 1836. p. 143., B. of Austr. pl.

15. M. *flavigula* Gould, Proc. Z. S. 1838. p. 24. — Melithreptes flavicollis *Vieill.* ?

16. M. *flavescens* Gould, Proc. Z. S. 1839. p. 144., B. of Austr. pl.

17. M. *versicolor* Gould, Proc. Z. S. 1842. p. 136., B. of Austr. pl.

18. M. ——, Voy. au Pole Sud, Ois. t. 17. f. 2.

19. M. *australasiana* (Shaw), Vieill. Ois. dor. t. 55. — Melithreptes melanoleucus *Vieill.*; Meliphaga inornata *Gould*; Certhia pyrrhoptera *Lath.* Lamb. Icon. ined. ii. 71.; Type of Meliornis *G. R. Gray* (1840).

20. M. *novæ hollandiæ* (Lath.) White, Voy. pl. p. 186., Vieill. Ois. dor. t. 57. — Meliphaga Balgonera *Steph.*; M. barbata *Swains.*

21. M. *sericea* Gould, Proc. Z. S. 1836. p. 144., White, Voy. pl. p. 297., Vieill. Ois. dor. t. 71. — Melithreptes ater *Vieill.*?; Meliphaga sericeola *Gould.*

22. M. *mysticalis* Gould, Proc. Z. S. 1840. p. 161.

23. M. *melanodera* Quoy & Gaim. Voy. de l'Astrol. Ois. t. 8. f. 1.

24. M. *pyrrhotis* Less. Rev. Zool. 1840. p. 271.

25. M. *limbata* Müll. & Schl. Verh. Nat. Gesch. Nederl. p. 162.

26. M. *maculata* Temm. Pl. col 29. f. 1.

27. M. *reticulata* Temm. Pl. col. 29. f. 2.

28. M. *rufogularis* (Gould), Proc. Z. S. 1837. p. 153., B. of Austr. pl. — Type of Acanthogenys *Gould* (1837).

29. ? M. *carunculata* (Gmel.) Vieill. Ois. dor. t. 69, 70. — Creadion musicus *Vieill.*

ANTHOCHÆRA *Vig. & Horsf.**

The characters are similar to those of Meliphaga; but the *Wings* are moderate and rounded, with the first four quills graduated, and the fifth and sixth equal and longest; and the *Tail* long, broad, and graduated on the sides.

The species are peculiar to the great continent of Australia. They frequent, in small flocks, the various species of Eucalypti and Banksias; on the pollen of the flowers of those trees they principally feed, as well as on the small insects that live in them. While searching for their food they are very active, and perform a variety of elegant movements. Their flight is undulating, and is seldom extended farther than from tree to tree; and they possess much courage, as they will attack all birds, without any regard to size, that approach near their nest. The nest is built in a low bush, and is formed of twigs, and lined with wool and fine grass. The female of one species is supposed only to lay a single egg at a time.

1. A. *mellivora* (Lath.) Vig. & Horsf. Lamb. Icon. ined. i. 33., Vieill. Ois. dor. t. 88., Gould, Syn. B. of Austr. pl., B. of Austr. pl. — Merops goruck *Shaw*; Meliphaga albiventer *Steph.*; Philemon chrysoptera *Vieill.*

2 A. *lunulata* Gould, Proc. Z. S. 1837. p. 153., B. of Austr. pl.

3. A. *carunculata* (Lath.) White, Voy. pl. p. 144.— Corvus paradoxus *Daud.* Tr. d'Orn. ii. t. 16.

4. A. *inauris* Gould, B. of Austr. pl. — Anthochæra carunculata *Vig. & Horsf.* Gould, Syn. B. of Austr. pl., Gal. des Ois. t. 94.

5. A. *Lewinii* Vig. & Horsf. Phill. Bot. Bay, pl. p. 164.

PROSTHEMADERA.*

The characters are very like those of the former genera; except that the *Wings* are moderate, with the fifth and sixth quills equal and longest, and the third, fourth, fifth, and sixth more or less

* Vigors and Dr. Horsfield established this genus in 1826 (*Linn. Trans.* xv. p. 320.).
† Established by me in 1840 (*List of the Genera of Birds*).

emarginated in the middle of the inner webs; and the *Tail* long, broad, and rounded on the sides.

The type of this genus is found in New Zealand and the Auckland Islands. It is an imitative, restless, and pugnacious bird, and sings sweetly with a whistling note. Its flight is heavy and noisy, and it builds its nest in shrubs, of twigs and moss; and usually deposits four eggs.

P. *novæ zealandiæ* (Gmel.) Strickl. — Merops cincinnata *Lath.* Le Vaill. Ois. d'Afr. t. 92.; Sturnus crispicollis *Daud.* Forst. Descr. Anim. p. 78. et Icon. ined. 61.

ANTHORNIS.*

This differs from the three preceding genera only by the form of the *Wing;* which is moderate, with the first quill short and pointed; the second shorter than the third, acutely pointed in the male, and emarginated and narrowing into a long point in the female; the third rather shorter than the fourth, fifth, and sixth, which are equal, longest, and rounded at the ends.

The species of this genus are peculiar to New Zealand and the Chatham Islands.

1. A. *melanura* (Sparrm.) Mus. Carls. t. 5. — Certhia sannio *Gmel.*; C. olivacea *Forst.* Descr. Anim. p. 79. et Icon. ined. 62.; Philedon Dumerilii *Less.* Voy. de la Coqu. Ois. t. 21. f. 2., Vieill. Ois. dor. t. 64.; Anthomyza cæruleocephala *Swains.*

2. A. *melanocephala* G. R. Gray, App. to Dieff. Trav. in New Zeal. ii. p. 188., Voy. Ereb. & Terr. Birds, pl. 2.

POGONORNIS.

Bill moderate, very slender, and much compressed on the sides, with the culmen and lateral margins gradually curved to the tip, which is strongly emarginated; the gonys long and curved; and the gape furnished with lengthened slender bristles; the nostrils basal, large, and placed in a large groove, with the opening linear, oblique, and covered by a membranous scale. *Wings* moderate, with the fourth quill the longest. *Tail* moderate and emarginated. *Tarsi* long and robust, and covered in front with transverse scales. *Toes* long, with the outer longer than the inner, and united at its base; the hind toe long and strong: the claws long, compressed, and acute.

This type is peculiar to New Zealand. Its flight is rapid; and, if surprised, it elevates its ear tufts, and spreads its tail, which gives it a singular appearance. Its food consists of berries and the larvæ of insects.

P. *cincta* (Dubus) Bull. Acad. Sc. Brux. 1839. p. 295. t. — Ptilotis auritus *Lafr.* Mag. de Zool. 1840. Ois. t. 11.

* This genus was originally established by Mr. Swainson, in 1837, under the name of *Anthomyza;* which name, having been previously used, was in 1840 changed by me to the above.

PHYLLORNIS *Boie.**

Bill rather long, and more or less strong, with the culmen curved, and the sides compressed to the tip, which is emarginated, acute, and sometimes hooked; the lateral margins curved and inflexed; the gonys long, curved, or advancing upwards; the nostrils basal, and placed in a membranous space, with the opening large, exposed, and anterior. *Wings* moderate, with the fourth, fifth, and sixth quills equal and longest. *Tail* moderate and slightly rounded. *Tarsi* very short, and covered in front with an entire scale. *Toes* short, with the outer longer than the inner; the hind toe long and strong: the claws moderate, compressed, and acute.

It is in the thick or lofty forests, and in the wooded cultivated ground and gardens, that the species of this genus are seen perched, in pairs or singly, on branches of a moderate height from the ground, searching both for the various fruits and insects that abound on them, uttering at the same time a rather pleasing note, which is often answered by some other of the same species at a distance. They occasionally dart after insects on the wing, if they approach within a short distance.

1. P. *cochinchinensis* (Gmel.) Pl. enl. 643. f. 3., Pl. col. 484. f. 2., Vieill. Ois. dor. t. 77, 78. — Meliphaga javensis *Horsf.*; Chloropsis moluccensis *Gray*, Zool. Misc. p. 33.?

2. P. *malabarica* (Lath.) Pl. col. 512. — Phyllornis icterocephala *Less.*

3. P. *Sonneratii* (Jard. & Selby), Ill. Orn. pl. 100. — Phyllornis Mülleri *Temm.*; Chloropsis gampsorhynchus *Jard. & Selby*, Ill. Orn. pl. 7.; Chl. zosterops *Vigors & Horsf.*; Turdus viridis *Horsf.*

4. P. *aurifrons* Temm. Pl. col. 484. f. 1. — Chloropsis malabaricus *Jard. & Selby*, Ill. Orn. pl. 5.

5. P. *casmarhynchus* Tick. Journ. S. A. B. ii. 579. — Chloropsis aurifrons *Jerd.*

6. P. *cyanopogon* Temm. Pl. col. 312. f. 1.

7. P. *mysticalis* Swains. Two Cent. and a Quart. p. 296.

8. P. *Hardwickii* (Jard. & Selby). — Chloropsis curvirostris *Swains.*; Ch. chrysogaster *Mc Clell.*; Ch. auriventris *Deless.* Mag. de Zool. 1840. Ois. t. 17.; Ch. cyanopterus *Hodgs.*

9. P. *viridis* (Vieill.) Ois. dor. t. 67, 68. — Phyllornis tonganepsis *Less.*

10. P. *? jala* (Bodd.) Pl. enl. 539. f. 2. — Turdus nigerrimus *Gmel.*; T. saui-jala *Lath.*

TROPIDORHYNCHUS *Vig. & Horsf.*†

Bill long, broad, and elevated at the base, and much compressed on the sides to the tip, which is emarginated; the culmen and lateral margins slightly curved, and the gonys long and nearly straight; the nostrils basal, lateral, and placed in a membranous space, with the opening anterior and exposed. *Wings* long, with the first quill half the length of the second; the fourth and fifth equal and longest. *Tail* more or less long, and rounded. *Tarsi* robust, rather longer than the middle toe, and covered in front with broad scales. *Toes* moderate and strong, with the outer toe longer than the inner, and united at its base; the hind toe long and very strong: the claws moderate, compressed, and curved.

These birds are found in most parts of Australia and New Guinea. They are usually seen on the various trees; the flowers of which are searched for the purpose of extracting the pollen, and for the insects which usually frequent them

* M. Boie established this division. *Chloropsis* of Sir W. Jardine and Mr. Selby is coequal.

† It was in 1826 that Vigors and Dr. Horsfield established this genus (*Linn. Trans.* xv. p. 323.). It embraces *Entomyzon* (1825) or *Entomyza* (1837) of Mr. Swainson, and probably *Leptornis* of MM. Hombron and Jacquinot, and *Philemon* of Vieillot (1816).

for a similar purpose. Berries, the fruits of the wild figs, and the juice that exudes from wounds in trees, are also stated to form a portion of their subsistence. They are often observed in small parties on the upper branches, from which they cling and hang in numerous graceful positions, while seeking their food; whilst thus engaged, they emit a loud monotonous cry. The eggs are deposited by the female of one species on the top of the domed nests of the Pomatorhini, whilst others form suspended nests of a large size in the form of a cup, and composed of stringy-bark, wool, and twigs, lined with grasses and fibrous roots. The eggs are usually two or three in number.

1. T. *corniculatus* (Lath.) Vig. & Horsf. Le Vaill. Ois. d'Amér. t. 24., Jard. & Selby, Illustr. Orn. pl. 133. — Merops monachus *Lath.* White, Voy. pl. p. 190.

2. T. *buceroïdes* Swains. Two Cent. and a Quart. p. 325., Less. Tr. d'Ornith. t. f. 2.

3. T. *argenticeps* Gould, Proc. Z. S. 1839. p. 144., Voy. au Pole Sud, Ois. t. 18. f. 2.

4. T. *citreogularis* Gould, Proc. Z. S. 1836. p. 143.

5. T. *bouroensis* (Quoy & Gaim.) Less. Voy. de l'Astrol. t. 8. f. 2.

6. T. *subcornutus* Temm. Voy. au Pole Sud, Ois. t. 16. f. 1.

7. T. ———, Voy. au Pole Sud, Ois. t. 18.

8. T. ———, Voy. au Pole Sud, Ois. t. 17. f. 1. — Type of Leptornis *Hombr. & Jacq.* (1845).

9. T. *timoriensis* Müll. & Schl. Verh. Nat. Gesch. Nederl. p. 153.

10. T. *chrysotis* Less. Voy. de la Coqu., Ois. t. 21. bis. — Myzantha flaviventer *Less.*

11. T. *inornatus* G. R. Gray.

12. T. *cyanotis* (Lath.) Lamb. Icon. ined. i. 57., Lewin. B. of N. H. pl. 4. — Turdus cyaneus *Lath.* Lamb. Icon. ined. ii. 36., Vieill. Ois. dor. t. 87.; Merops cyanops *Lath.* Lamb. Icon. ined. i. 57., Gould, B. of Austr. pl.; Type of Entomyza *Swains.* (1837).

13. T. *albipennis* (Gould), Proc. Z. S. 1840. p. 169., Gould, B. of Austr. pl.

14. T. ? *moluccensis* (Gmel.) — Type of Philemon *Vieill.* (1816).

October, 1846.

Hullmandel & Walton, Lithographers.

MELITHREPTUS
gularis Gould

The third Subfamily

MELITHREPTINÆ, or HONEY-FEEDERS,

have the Bill short, subconic, with the culmen slightly curved, and the sides much compressed towards the tip, which is sometimes emarginated and acute; the Wings more or less long, with the fourth to the seventh quills generally the longest; the Tarsi short and strong; the Toes more or less long, the lateral toes unequal, the outer the longest, and united at its base; the Claws moderate, compressed, and acute.

MANORHINA *Vieill.**

Bill short, with the culmen and lateral margins curved, and the sides compressed to the tip, which is curved and emarginate; the gonys moderate and ascending; the nostrils basal, placed in a broad groove, and partly clothed by the projecting plumes, with the opening closed by a large membranous scale. *Wings* moderate, with the first quill short, the second much shorter than the third, which is rather shorter than the fourth and fifth: these are equal and longest. *Tail* long and rounded on the sides. *Tarsi* rather longer than the middle toe, robust and covered with slightly divided scales. *Toes* rather short, with the outer toe rather longer than the inner, and united at the base, the hind toe long and strong; the claws long, curved, and acute.

The birds that compose this genus are peculiar to the Australian Continent. They are generally seen on the Eucalypti in small troops of few individuals, searching among the leaves and flowers for the insects, and in the latter also for the pollen. They are very active, often removing from tree to tree, and while on the branches engaged in seeking for their food, perform a series of singular actions, at the same time spreading out their wings and tail. Occasionally they are observed at the roots of the trees examining for hard-winged insects. The nest is formed of fine twigs and coarse grass, lined with wool, &c., and it is usually placed among the small upright branches of small trees.

1. M. *melanophrys* (Lath.) G. R. Gray. Lamb. Icon. ined. ii. 48. —Manorhina viridis *Vieill.* Gal. des Ois. t. 149., Jard. & Selby, Ill. Orn. pl. 78.; Myzantha flavirostris *Vig. & Horsf.* Gould, B. of Austr. pl.
2. M. *garrula* (Lath.) Vig. & Horsf. Lamb. Icon. ined. i. 56., Gould, B. of Austr. pl.
3. M. *obscura* Gould, Proc. Z. S. 1840. p. 159., B. of Austr. pl.
4. M. *flavigula* Gould, Proc. Z. S. 1839. p. 143., B. of Austr. pl.
5. M. *lutea* Gould, Proc. Z. S. 1839. p. 144., B. of Austr. pl.
6. M. *citreola* Gould, Proc. Z. S. 1839. p. 144.

* Established by Vieillot in 1825 (*Galerie des Oiseaux*). *Myzantha* of Vigors and Dr. Horsfield (1826), and *Philanthus* of M. Lesson, (1831), are synonymous.

Melithreptus *Vieill.**

Bill rather short and very acute, with the culmen and lateral margins gradually curved, and the sides compressed to the tip, which is very acute, and slightly emarginated at a little distance from the tip; the gonys long and slightly curved; the nostrils basal, and placed in a broad groove with the opening closed by a large membranous scale. *Wings* moderate, the first quill short, the second shorter than the third, which is nearly equal to the fourth and fifth; these are equal and longest. *Tail* moderate and emarginate. *Tarsi* rather longer than the middle toe, strong and covered with divided scales. *Toes* rather short, with the outer toe rather longer than the inner, and united at the base, the hind toe long and strong, the claws moderate, curved, and acute.

The species are only found in various parts of Australia, especially on the Eucalypti and Acaciæ in small parties of few individuals. They usually creep about the leafy and flower-bearing branches with perfect ease and great rapidity, searching for insects and the pollen of the flowers. Some species were observed by Mr. Gould to cling to the trunks of the trees, for the purpose of seeking for insects that are found on them, and they also frequent the trees in orchards to feed on the fruits, upon which they frequently commit great havoc. While perched motionless on the topmost dead or bare branches, they sometimes utter a loud harsh noise or whistling note, which at once proclaims their locality.

1. M. *lunulatus* (Shaw.) Vieill. Ois. dor. t. 61., Lewin. B. of N. Holl. pl. 24., Jard. & Selby, Ill. Orn. pl. 134. f. 2. — Meliphaga torquata *Swains.* Zool. Ill. pl. 116.; M. atricapilla, Temm. Pl. Col. 395. f. 1.
2. M. *atricapillus* (Lath.) Vieill. Lamb. Icon. ined. ii. 79.
3. M. ——. Meliphaga atricapilla *Jard. & Selby*, Ill. Orn. pl. 134. f. 1.
4. M. *pipilans* (Lath.) Vieill. Lamb. Icon. ined. ii. 63.
5. M.? *inornatus* (Lath.) Lamb. Icon. ined. ii. 29.
6. M. *virescens* (Wagl.) Syst. Av. Sturnus, sp. 5. — Hæmatops validirostris *Gould*, Proc. Z. S. 1836. p. 144., Voy. au Pole Sud, Ois. t. 17. t. 1.; Syn. B. of Austr. pl. f. 2. head., B. of Austr. pl.; Eidopsarus bicinctus *Swains.*; Type of Eidopsarus *Swains.* (1837.)
7. M. *gularis* Gould, Proc. Z. S. 1836. p. 144. Syn. of Austr. B. pl. f. 3. head.; B. of Austr. pl.
8. M. *affinis* (Less.) Rev. Zool. 1839. p. 167. — Melithreptus melanocephalus *Gould*, Proc. Z. S. 1845. p. 62.; B. of Austr. pl.
9. M. *indistinctus* (Vig. & Horsf.) Linn. Trans. xv. p. 315.
10. M. *brevirostris* (Vig. & Horsf.) Linn. Trans. xv. p. 315.
11. M. *lanceolatus* (Gould.) Syn. B. of Austr. pl. iv. pl., Proc. Z. S. 1837. p. 153.; B. of Austr. pl. — Type of Plectrorhyncha *Gould* (1837.).

Psophodes *Vig. et Horsf.* †

Bill rather short and strong, with the culmen and lateral margins gradually curved, and the sides much compressed to the tip, which is rather obtuse and unemarginated; the nostrils basal, and placed in a broad groove and partly covered by the projecting plumes, with the opening small, anterior, and partly closed by a small membranous scale. *Wings* rather short, with the first four quills graduated, and the fifth, sixth, and seventh, equal and longest. *Tail* lengthened and much graduated. *Tarsi* the length of the middle toe, strong, and covered with broad scales. *Toes* long, with the outer toe longer than the inner, and united at the base, the hind toe long and strong; the claws rather short, compressed, and curved.

* Established in 1816 by Vieillot (*Analyse, &c.* p. 46.). *Hæmatops* (1836) of Mr. Gould, *Gymnophrys* and *Eidopsarus* (1837) of Mr. Swainson, are coequal with the name employed. It embraces *Plectrorhyncha* of Mr. Gould (1837).

† Vigors and Dr. Horsfield established this genus in 1826 (*Linn. Trans.* xiii. p. 328.).

It is in various parts of the great continent of Australia, that the species of this genus are found. They are seen mostly on the Eucalypti examining the flowers for the insects that abound in them, as well as for the honey they contain. They rarely expose themselves while thus engaged, but generally keep in the midst of the closely-set foliage, among which they move about with the greatest ease, possessing much sprightliness of action, raising their crest and spreading out and slightly elevating their tail at the same time. They are occasionally observed on the ground, when they are occupied in turning over the fallen leaves and small stones for the purpose of procuring various kinds of insects that are found in such places. Their chattering noise is generally ended by a loud sharp note, which has been compared to the cracking of a whip.

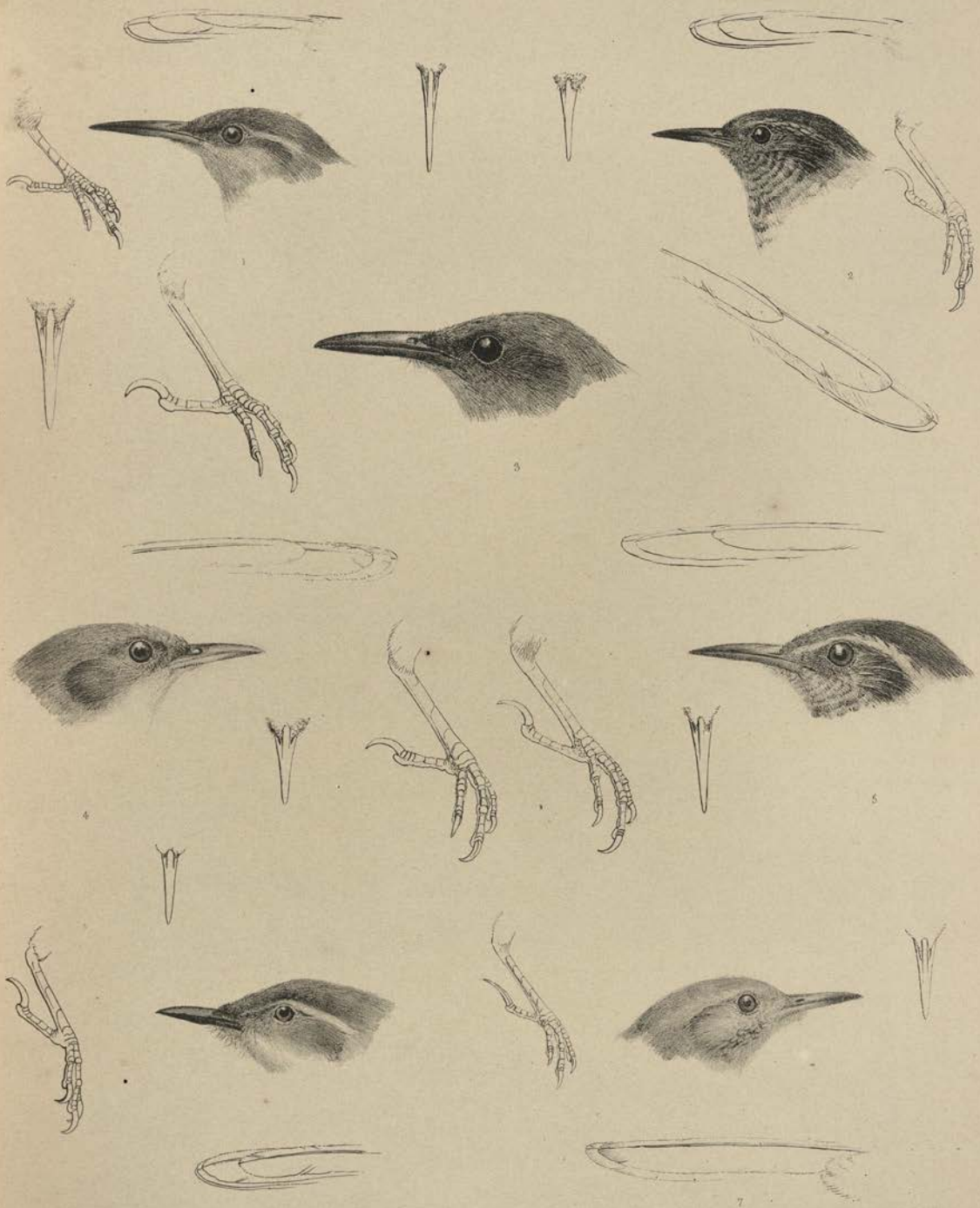
1. P. *crepitans* (Lath.) Vig. et Horsf., Lamb. Icon. ined. ii. 47., Jard. and Selby, Ill. Orn. pl. 60. — Corvus olivaceus *Lath.* Lamb. Icon. ined. i. 48.; Pica gularis *Wagl.*; Dasyornis Abeillei, *Less.*

2. P. *nigrogularis* Gould, Proc. Z. S. 1844. p. 5., B. of Austr. pl.

November, 1846.

ENICORNIS
melanura. G.R. Gray.

C. Hullmandel's Patent Lithotint.



Wolf del et lith.

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1. LIMNORNIS rectirostris. 2. LOCHMIAS St Hilarii. 3. CINCLOCERTHIA ruficauda. 4. ENICORNIS phœnicura. 5. CINCLODES paragonicus. 6. FURNARIUS figulus. 7. GEOSITTA maritima.

The fifth Family,

CERTHIDÆ, or CREEPERS,

have the Bill more or less long, and generally slender, with the tip entire and slightly arched; the Nostrils usually small, and covered by a membranous scale; the Wings of various lengths, sometimes rounded, and sometimes rather pointed; the Tail varying much in length and form; the Tarsi and Toes differing much in length, especially the latter, and forming characters for the separate subfamilies of this large group.

The fifth Subfamily,

FURNARINÆ, or OVEN-BIRDS,

have the Toes rather long, the lateral ones unequal, the outer rather the longest, and slightly united at its base, the inner toe free at its base.

FURNARIUS *Vieill.**

Bill more or less long, slender, and compressed on the sides, with the culmen slightly curved at the tip, which is entire; the nostrils basal, lateral, placed in a small nasal groove, with the opening oval, partly closed by a membrane, and clothed with the frontal plumes. *Wings* moderate, with the first quill shorter than the second, and the latter shorter than the third, which is slightly shorter than the fourth and fifth; these are very nearly equal and longest. *Tail* moderate, rather square, or rounded on the sides. *Tarsi* much longer than the middle toe, and covered with broad scales. *Toes* moderate, with the lateral toes equal, and the outer one united at the base; the hind toe nearly as long as the middle toe, strong, and armed with a strong curved claw.

It is in the warmer parts of South America that these small birds are found, especially in the bushes on the banks of the rivers, or in those near the dwellings of man, and even in open places. They are always seen in pairs, very active, and capable, when on the ground, of running and walking with great rapidity; their flight is not much prolonged, being only from bush to bush, which they minutely examine for insects, chiefly those of the coleopterous kind, although they occasionally feed on seeds. When perched on an eminence or tree, the male utters a series of loud shrill notes that are peculiar to these birds; those of the female are of the same kind, though delivered in a much lower key. The nest is generally built in an exposed situation, as on a thick leafless branch, the top of a paling, or on windows, but sometimes even in the interior of houses and other buildings. Both sexes work in concert, and each alternately brings a lump of clay, and pieces of straw, or the dry stems of plants, which they place, and then go to procure others; when finished, it has the appearance of an oven, of about six to eight inches in diameter, and about one inch in thickness.

* Established by Vieillot in 1816 (*Analyse, &c.* p. 47.). *Opetiorhynchus* of M. Temminck (1820) and *Figulus* of Spix (1824) are coequal with the name employed.

At the entrance, which is on the side, there is a partition that reaches nearly to the roof, and terminates circularly in the inner chamber, where are deposited, on a bed of feathers or fine grass, four eggs. The united pair defend the approach to the nest by cries and threatening gestures.

1. F. *rufus* (Gmel.) Vieill. — Turdus badius *Licht.*; Opetiorhynchus ruficaudus *Pr. Max.*; Figulus albogularis *Spix*, Av. Bras. t. 78. f. .
2. F. *figulus* (Ill.) Pl. enl. 739. — Opetiorhynchus rufus *Pr. Max.*; Furnarius melanotis *Swains.*
3. F. *rectirostris* (Pr. Max.) Beitr. iii. p. 679.
4. F. *leucopus* Swains. Two Cent. and a Quart. p. 324.
5. ? F. *griseus* Swains. Two Cent. and a Quart. p. 325.
6. ? F. *longipennis* Swains. Two Cent. and a Quart. p. 350.
7. ? F. *fasciatus* Swains. Two Cent. and a Quart. p. 351.

Cinclodes.*

Bill of various lengths, slender, much compressed on the sides, with the culmen slightly arched to the tip, which is entire; the nostrils basal, lateral, with the opening longitudinal, narrow, and covered by a membrane that is partly clothed by the small frontal plumes. *Wings* long and rather pointed, with the first quill much shorter than the second, which is rather shorter than the third and fourth; these are the longest. *Tail* long, broad, and rounded on the sides. *Tarsi* rather longer than the middle toe, and covered in front with broad scales. *Toes* long and slender, with the outer toe longer than the inner, and united at its base; the hind toe as long as the middle toe without the claw, strong, and armed with a strong claw.

It is in various parts of the continent of South America, that the species of this genus are scattered. These birds, observes Mr. Darwin, live on the sea beach, whether formed of shingle or rock, and may occasionally be seen walking on the buoyant leaves of the *Fucus giganteus* at some little distance from the sea shore. The pebbly beds of large rivers sometimes tempt a solitary pair to wander far from the coast, and others frequent the borders of lakes. They seem occasionally to wander inland, for they have been observed in the stony arid valleys of the Cordillera, at a height of at least 8000 feet, and even in open desert places in which a few bushes grow, or in open grassy plains. When on the ground they hop about quickly, and often change their place by a short flight. Their food consists of insects, small crabs, and minute shells, which they usually search for among the refuse of the sea weeds and leaves, &c., that are thrown on the shore by the sea. Others may be noticed turning over and picking the dry pieces of dung, and they occasionally feed on seeds. The notes of these birds are very acute, and consist of a shrill cry quickly reiterated, so as to make a running sound. Mr. Darwin states that the nest which he found was placed in a small hole in the roof of a deep cavern, not far from the bank of a pebbly stream, and another was found in a small hole beneath an old tree, close to the sea beach. They were composed of coarse grass, and were untidily built.

1. C. *patagonicus* (Gmel.) G. R. Gray. — Motacilla gracula *Forst.* Desc. Anim. p. 324., Icon. ined. 160.; Furnarius chilensis *Less.* Tr. d'Orn. t. 75. f. 1.; F. Lessoni *Dum.*; Opetiorhynchus rupestris *Kittl.* Mém. de l'Acad. St. Petersb. i. t. 8.
2. C. *vulgaris* (D'Orb. & Lafr.) Syn. Av. ii. p. 22., Voy. dans l'Amér. Mér. Ois. t. 57. f. 1.
3. C. *antarcticus* (Garn.) Ann. des Sci. 1826. p., Pern. Voy. ii. p. 20. — Furnarius fuliginosus *Less.* Voy. de la Coqu. Zool. p. 670.
4. C. *nigrofumosus* (D'Orb. & Lafr.) Syn. Av. ii. p. 23., Voy. dans l'Amér. Mér. Ois. t. 57. f. 2., Voy. of Beagle, Birds, pl. 20.
5. C. *montanus* D'Orb. & Lafr. Voy. dans l'Amér. Mér. Ois. t. 56. f. 1.
6. C. *andæcola* D'Orb. & Lafr. Voy. dans l'Amér. Mér. Ois. t. 56. f. 2.
7. C. *inornatus* Less. Rev. Zool. 1840. p. 267.
8. C. *palliatus* Tschudi, Faun. Peruana, p. 21.
9. C. *dumetorius* (I. Geoffr., D'Orb.) — Upucerthia dumetorum *D'Orb. & Lafr.* Av. Syn. ii. p. 20., Voy. of Beagle, Birds, pl. 19.; Type of Upucerthia *I. Geoffr.* (1832).
10. ? C. *ruficaudus* (Meyen), Nov. Act. Nat. Cur. xvi. suppl. t. ii. — Type of Ochetorhynchus *Meyen* (1834).

* Established by me in 1840. *Cillurus* (1844) of M. Cabanis is synonymous. It embraces *Upucerthia* (1832) of M. Isidore Geoffroy, and *Ochetorhynchus* (1834) of M. Meyen.

Lochmias *Swains.**

Bill nearly as long as the head, slender, the sides compressed, with the tip slightly curved and entire; the gonys long, straight, and slightly curved at the tip; the nostrils lateral, basal, placed in a small groove, and the opening covered by a membrane, and linear. *Wings* short and rounded, with the first two quills graduated, and the third and fourth nearly as long as the fifth, which is the longest. *Tail* short, soft, and rounded, with the shafts forming slender points beyond the webs. *Tarsi* longer than the middle toe, and with broad scales in front. *Toes* long and slender, with the outer toe longer than the inner, and united at its base; the hind toe nearly as long as the middle toe; the claws moderate, curved, and acute.

The type of this genus is an inhabitant of the Brazils.

L. *St. Hilarii* (Less.) — Lochmias squamulata *Swains.* Birds of Braz. pl. 38.

Enicornis.†

Bill as long as, or longer than, the head, straight, with the culmen at the tip slightly curved and entire; the nostrils basal, lateral, placed in a nasal groove, with the opening linear. *Wings* short, with the fourth, fifth, and sixth quills the longest, and the secondaries as long as the primaries. *Tail* moderate, and rounded on the sides. *Tarsi* short, and covered with broad scales. *Toes* rather short, with the lateral toes unequal; the hind toe shorter than the middle toe; the claws moderate and curved.

It is on the barren Cordillera, on the coast of Patagonia, and other parts of South America, that these birds are found. They live entirely on the ground, and generally, says Mr. Darwin, in dry sterile situations, where they haunt the scattered thickets, often flying from one to another. When searching about the bushes, they carry their tails erect; and they feed on coleopterous and other kinds of insects.

1. E. *phœnicura* (Gould), Voy. of Beagle, Birds, p. 69. pl. 21. | 2. E. *melanura* G. R. Gray.

Limnornis *Gould.*‡

Bill as long as, or longer than, the head, much compressed on the sides, with the culmen slightly curved to the tip, which is entire; the nostrils basal, lateral, placed in a nasal groove, with the opening covered by a membrane, and linear. *Wings* very short and rounded, with the fourth, fifth, and sixth quills nearly equal and longest. *Tail* short and graduated, the end of each feather obliquely pointed, and the shaft prolonged beyond the web. *Tarsi* as long as the middle toe, and strongly scaled. *Toes* long and slender, with the lateral ones unequal, the outer the longest, and slightly united at its base; the hind toe rather shorter than the middle toe; the claws short, strong, and slightly curved.

* Established by Mr. Swainson in 1827 (*Zoological Journal*, iii. p. 355.). *Picerthia* of M. Isidore Geoffroy (1832) is synonymous.

† This genus was established in 1839 by Mr. Gould, under the name of *Eremobius;* but, as this word had been previously employed, it was changed by me to the above appellation.

‡ Established by Mr. Gould in 1839 (*Voyage of the Beagle, Birds*, p. 80.).

It is on the reedy and marshy borders of the South American lakes that these birds are found. They often alight, says Mr. Darwin, vertically on the stems of plants, but in climbing they do not use their tails.

1. L. *curvirostris* Gould, Voy. of Beagle, Birds, p. 81. pl. 25.
2. L. *rectirostris* Gould, Voy. of Beagle, Birds, p. 80. pl. 24.
3. L. *unirufus* Lafr. Rev. Zool. 1840. p. 105.
4. L. *canifrons* Lafr. Rev. Zool. 1840. p. 105.

GEOSITTA *Swains.**

Bill long, slender, much compressed on the sides, with the culmen slightly curved at the tip, which is entire; the nostrils lateral, basal, placed in a nasal groove, with the opening partly closed by a membrane and longitudinal. *Wings* lengthened, with the first quill nearly as long as the second, and the third and fourth quills the longest. *Tail* short, broad, and even at its end. *Tarsi* much longer than the middle toe, and covered in front with broad scales. *Toes* short, with the lateral ones unequal, the outer the longest, and slightly united at its base, the hind toe as long as the middle toe, and armed with long, slightly curved, and acute claws.

These birds are found in many parts of the continent of South America, where they are usually seen on the dry open sandy plains. They are tame and solitary birds, usually most active early in the morning and late in the evening, at which time they are searching for their food, which consists of coleopterous insects. The nest of the typical species is built, says Mr. Darwin, at the bottom of a narrow cylindrical hole, which extends horizontally to nearly six feet under ground. The bird chooses a low bank of firm sandy soil, by the side of a road or stream.

1. G. *cunicularia* (Vieill.) — Alauda fissirostra *Kittl.* Mém. de l'Acad. Petersb. 1835. t. 3.; Geositta anthoïdes *Swains.* Voy. dans l'Amér. Mér. Ois. t. 43. f. 1.
2. G. *tenuirostris* (D'Orb. & Lafr.) Voy. dans l'Amér. Mér. Ois. t. 43. f. 2.
3. G. *maritima* (D'Orb. & Lafr.) Voy. dans l'Amér. Mér. Ois. t. 44. f. 1.
4. G. *brevicauda* (Swains.) Two Cent. and a Quart. p. 322. — Type of Geobates *Swains.* (1837).

CINCLOCERTHIA.†

Bill longer than the head, broad at the base, much compressed on the sides, with the culmen slightly curved at the tip, which is entire; the gonys long and straight; the nostrils basal, lateral, with the opening oval, and partly closed by a membrane. *Wings* rather short and rounded; with the first quill very short, and the fourth, fifth, and sixth quills nearly equal and longest. *Tail* moderate, and rounded on the sides. *Tarsi* longer than the middle toe, robust, and scutellated in front. *Toes* long and slender, with the lateral toes nearly equal, the outer united at its base; the hind toe nearly equalling the length of the middle toe; the claws moderate, compressed, and much curved.

The type of this division is peculiar to the West Indies, especially the Island of Jamaica.

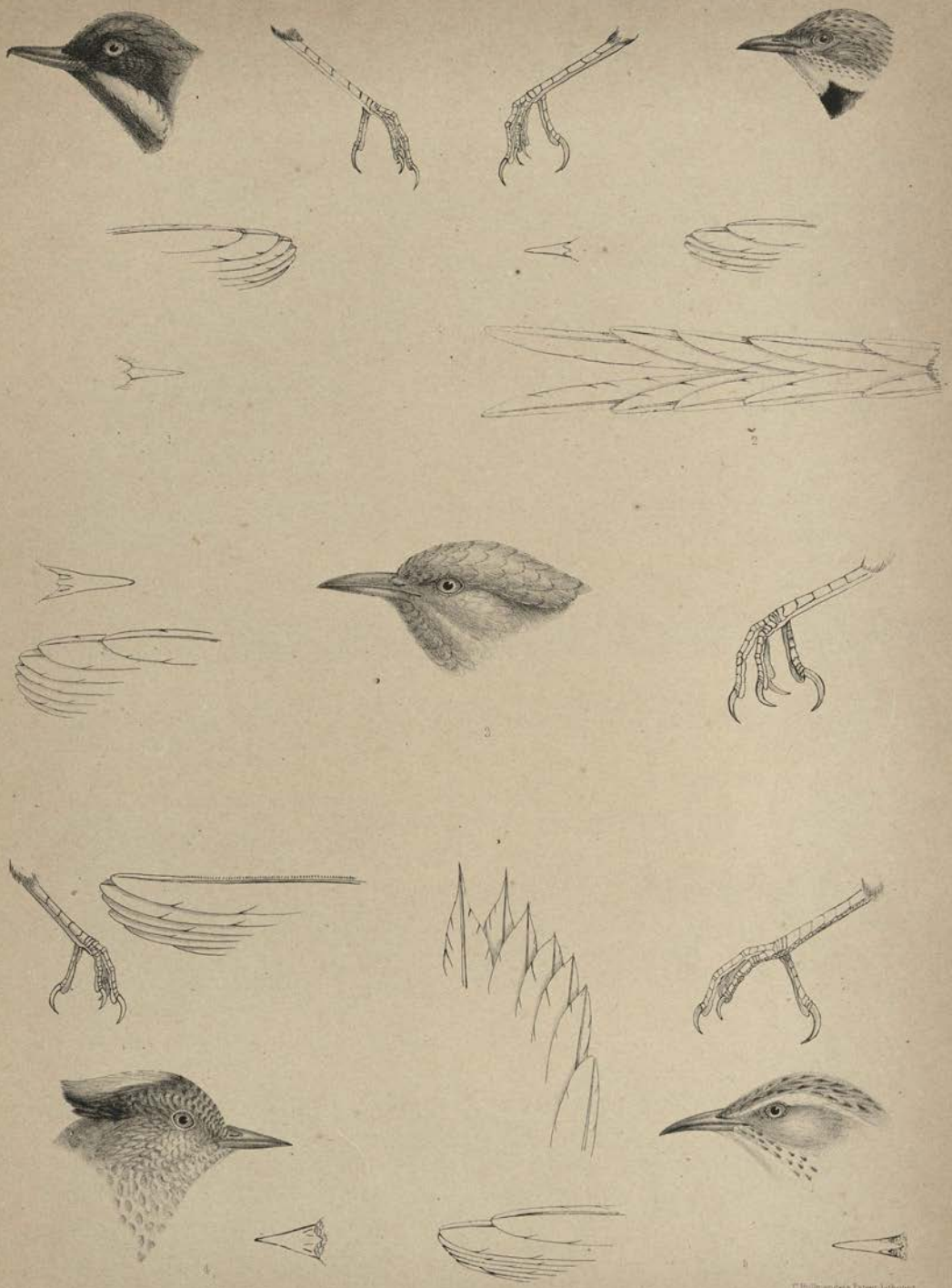
C. *ruficauda* (Gould), Proc. Z. S. 1835. p. 186.

* It was in 1837 that Mr. Swainson established this genus (*Class. of Birds*, ii. p. 317.). It embraces *Geobates* of the same author, (1837).

† Originally established under the name of *Stenorhynchus* by Mr. Gould in 1835; but, this name having been previously employed, I proposed the above appellation in 1840.

C.Hullmandel's Patent Lithotint.

DIGLOSSA
baritula. Wagl.



C. Hullmandel's Patent Lithotint

1. DIGLOSSA mystacea. *G. R. Gray.* 2. SYNALLAXIS phryganophila. 3. ANABATES unirufus.
4. OXYRHAMPHUS flammiceps. 5. ANNUMBIUS acuticaudatus.

The second Subfamily,

SYNALLAXINÆ, or SHARP-TAILS,

have the Toes moderate and strong, with the lateral toes unequal, the outer one the longest, and united to near the first joint, and the inner slightly united at the base; the hind toe long and strong; the claws strong, compressed, and curved.

SYNALLAXIS *Vieill.**

Bill short, more or less slender, with the culmen curved to the tip, which is entire and acute; the sides much compressed; the gonys long, straight, and advancing upwards; the nostrils basal and lateral, with the opening longitudinal, and more or less closed by a membrane. *Wings* short and rounded, with the first quill much shorter than the second; this is rather shorter than the third, fourth, and fifth, which are the longest. *Tail* more or less lengthened, always graduated, soft, and partaking of various forms. *Tarsi* longer than the middle toe, slender, and covered with broad scales in front. *Toes* moderate or lengthened, with the lateral ones unequal, the outer the longest, and united at its base; the hind toe nearly as long as the middle one, and strong; the claws moderate, compressed, and curved.

This genus is peculiar to the continent of South America. The species are usually found in pairs, but sometimes in scattered flocks of twelve or fourteen, on the borders of lakes and rivers, or on the rushy inundated places, where they are actively engaged moving by short flights from one stem of a reed or of other plants to another, remaining only a short time on each, climbing up and down them as if searching for minute insects and seeds. They carry their tails usually erect, uttering at intervals a shrill quickly repeated note. The flight of these small birds from one locality to another is performed with a sudden jerk, and they walk rather quickly and with ease on the ground, where some species are more commonly observed feeding among the withered herbage. The nests are cylindrical, very large, and generally placed in the middle of a compact bush. They are composed outwardly of prickly branches, with the entrance at the upper extremity, from which a curved passage leads to the inner compartment, which is lined with feathers and hairs.

1. S. *ruficapilla* Vieill. N. Dict. d'Hist. Nat. xxxii. 210., Gal. des Ois. t. 74. — Sphenura ruficeps *Licht.*; Parulus ruficeps *Spix*, Av. Bras. t. 86. f. 2.; Synallaxis albescens *Temm.* Pl. col. 227. f. 2.; S. cinereus *Pr. Max.*
2. S. *Azaræ* D'Orb. & Lafr. Voy. dans l'Amér. Mér. Ois. p. 246.
3. S. *humicola* Kittl. Mém. Acad. des Sci. Petersb. 1830. t. 6., Voy. dans l'Amér. Mér. Ois. t. 17. f. 2.
4. S. *leucocephala* D'Orb. & Lafr. Syn. Av. p. 24.
5. S. *ægithaloïdes* Kittl. Mém. Acad. des Sci. Petersb. 1830. t. 7.
6. S. *fuliginiceps* D'Orb. & Lafr. Syn. Av. p. 23., Voy. dans l'Amér. Mér. Ois. t. 17. f. 1.
7. S. *albiceps* D'Orb. & Lafr. Syn. Av. p. 23., Voy. dans l'Amér. Mér. Ois. t. 16. f. 2.
8. S. *striaticeps* D'Orb. & Lafr. Syn. Av. p. 22., Voy. dans l'Amér. Mér. Ois. t. 16. f. 1.
9. S. *ruficauda* Vieill. N. Dict. d'Hist. Nat. xxxii. 310. — Sphenura mentalis *Licht.*? Azara No. 223.; Sylvia russeola *Vieill.*; Opetiorhynchus inundatus *Temm.* Spix Av. Bras. t. 86. f. 1.; Synallaxis caudacutus *Pr. Max.*

* Established by Vieillot in 1809 (*Nouv. Dict. d'Hist. Nat.*). It is coequal with *Parulus* of Spix (1824), and it embraces *Oxyurus* of Mr. Swainson (1827).

10. S. *troglodytoïdes* D'Orb. & Lafr. Syn. Av. p. 22.
11. S. *maluroïdes* D'Orb. & Lafr. Syn. Av. p. 22., Voy. dans l'Amér. Mér. Ois. t. 14. f. 3, 4.
12. S. *anthoïdes* King, Proc. Z. S. 1831. p. 30.
13. S. *phryganophila* Vieill. N. Dict. d'Hist. Nat. xxxii. 207., Azara, No. 229. — Synallaxis tessellata *Temm.* Pl. col. 311. f. 1.
14. S. *candei* D'Orb. & Lafr. Rev. Zool. 1838. p. 165.
15. S. *rutilans* Temm. Pl. col. 227. f. 1.
16. S. *cinerascens* Temm. Pl. col. 228.
17. S. *setaria* Temm. Pl. col. 311. f. 2.
18. S. *rufigularis* Gould, Voy. of Beagle, Birds, p. 77. pl. 23.
19. S. *brunnea* Gould, Voy. of Beagle, Birds, p. 78.
20. S. *Thelotii* Less. Rev. Zool. 1840. p. 99.
21. S. *sordida* Less. Rev. Zool. 1839. p. 105. — Synallaxis flavogularis *Gould*, Voy. of Beagle, Birds, p. 78. pl. 24.
22. S. *pallida* Pr. Max. Beitr. iii. p. 691.
23. S. *rufifrons* (Ill.) Spix, Av. Bras. t. 85. f. 1. — Sphenura frontalis *Licht.*; Malurus garrulus *Swains.* Zool. Ill. pl. 138.
24. S. *melanops* (Vieill.) N. Dict. d'Hist. Nat. ii. p. 232., Azara No. 460. — Synallaxis dorso-maculata *D'Orb. & Lafr.* Syn. Av. p. 21., Voy. dans l'Amér. Mér. Ois. t. 14. f. 1, 2.
25. S. *? torquata* Pr. Max. Beitr. iii. 697. — Synallaxis bitorquata *D'Orb. & Lafr.* Syn. Av. p. 24., Voy. dans l'Amér. Mér. Ois. t. 15. f. 2.
26. S. *? Maximiliani* D'Orb. Voy. dans l'Amér. Mér. Ois. t. 15. f. 1. — Synallaxis torquata *D'Orb. & Lafr.* Syn. Av. p. 25., Azara No. 235.
27. S. *patagonica* D'Orb. Voy. dans l'Amér. Mér. p. 249.
28. S. *? cinnamomea* (Gmel.) Swains. — Synallaxis ruficauda *Spix*, Av. Bras. t. 85. f. 2.
29. S. *spinicauda* (Gmel.) Lath. Syn pl. — Motacilla seticauda *Forst.* Desc. Mam., Icon. ined. 161.; Oxyurus ornatus et O. australis *Swains.*; O. patagonicus *Less.*; Synallaxis tupinieri *Less.* Voy. de la Coqu. t. 29. f. 1., Less. Tr. d'Orn. t. 74. f. 2.
30. S. *striaticollis* Lafr. Rev. Zool. 1843, p. 290.
31. S. *unirufa* Lafr. Rev. Zool. 1843, p. 290.
32. S. *fuliginosa* Lafr. Rev. Zool. 1843, p. 290.
33. S. *brachyura* Lafr. Rev. Zool. 1843, p. 290.
34. S. *gularis* Lafr. Rev. Zool. 1843, p. 290.
35. S. *cinnamomea* Lafr. Rev. Zool. 1843, p. 291.

Annumbius *D'Orb.**

Bill long, slender, and the sides compressed, with the culmen slightly arched to the tip, which is acute; the nostrils basal, lateral, with the opening small and partly closed by a membrane. *Wings* moderate, with the first quill shorter than the second, third, and fourth, which are the longest. *Tail* long and broad, with the end of each feather obliquely pointed. *Tarsi* as long as the middle toe, and covered with the scales. *Toes* long and slender, with the outer toe longer than the inner; the hind toe very long and robust; the claws long, compressed, curved, and acute.

The species of this genus are found in pairs in the forests, and on the borders of thickets, or even close to the habitations of man, in the warmer parts of South America. When perched, their posture is threatening and animated, especially that of the male when delivering his sonorous notes. They fly with a jerking motion from bush to bush, perching on the highest point. They are sometimes noticed walking on the ground with a slow pace, searching for the small insects, worms, and snails, on which they subsist. Each pair is usually perched close to its enormous nest, which they do not quit except to seek food, and then they return immediately to defend it against the approach of other birds, which they attack without reserve, and without fear of their size. The nest, on which they are constantly working, is placed, often much exposed, at the end of the inclined branches of a spinous tree, or in the middle of an isolated bush. It is sometimes constructed over streams, and not unfrequently two are placed together; and it is extraordinarily large for the size of its constructors, reaching sometimes two feet in height, and one and a half in diameter, of an elongated oval form, with the broadest part below. Its outside is protected by many large thorny branches, intertwined with such art that they cannot be pulled asunder without destroying the interior of the nest, which is lined with feathers, hairs, and straw. Internally it consists of two chambers, of which one is rather spacious, and opens on the side or top. In this chamber there is a corridor, which at first ascends, and then leads down to a second compartment better furnished with feathers, &c., and on these the female lays four or five eggs. The parents, who take great care of their nest, drive their young from it as soon as they are old enough to take care of themselves.

* Established by M. D'Orbigny and Baron Lafresnaye in 1838 (*Synopsis Avium.*).

1. A. *acuticaudatus* (Less.) Tr. d'Orn. p. 424. — Furnarius annumbi *Vieill.* Azara No. 222.; Annumbius anthoides *D'Orb. & Lafr.*; Synallaxis major *Gould,* Voy. of Beagle, Birds, p. 76. pl. 22.

2. A. *ruber* (Vieill.) D'Orb. & Lafr. N. Dict. d'Hist. Nat. xii. p. 118., Azara No. 220.

3. A. *striaticollis* D'Orb. & Lafr. Syn. Av. pl. ii. p. 18.

4. A. *striaticeps* D'Orb. & Lafr. Syn. Av. pl. ii. p. 19.

Diglossa *Wagl.**

Bill shorter than the head, and much compressed on the sides, the culmen gradually curved to the tip, which is suddenly hooked over the lower mandible, very acute, and tridentated on the sides; the lower mandible much compressed on the sides to the tip, which is very acute and curved upwards; the nostrils basal, lateral, with the opening small, rounded, and almost hidden by the small frontal plumes. *Wings* rather long, with the first quill much shorter than the second, which is rather shorter than the third and fourth; these are the longest. *Tail* moderate and slightly rounded. *Tarsi* much shorter than the middle toe, and covered with very broad scales. *Toes* short and strong, with the outer toe rather longer than the inner, and united at its base; the hind toe nearly as long as the middle toe, and strong; the claws moderate, compressed, and curved.

The species of this genus are found in Mexico and the northern portions of South America.

1. D. *baritula* Wagl. Isis, 1832. — Uncirostrum Brelayi *Lafr.*; U. Orbignyii *Boiss.*; Agrilorhinus sittaceus *Pr. Bonap.*

2. D. *carbonaria* (D'Orb. & Lafr.) Syn. Av. pl. ii. p. 25., Voy. dans l'Amér. Mér. Ois. t. f.

3. D. *sittoïdes* (D'Orb. & Lafr.) Syn. Av. pl. ii. p. 25., Voy. dans l'Amér. Mér. Ois. t. f. — Agrilorhinus olivaceus *Fras.*

4. D. *La Fresnayii* (Boiss.) Rev. Zool. 1840. p. 5. — Agrilorhinus Bonapartei et A. humeralis *Fras.* Proc. Z. S. 1840. p. 22.

5. D. *cyanea* (Lafr.) Rev. Zool. 1840. p. 102. — Agrilorhinus personatus *Fras.*; Diglossa melanopis *Tschudi.*

6. D. *albilatera* Lafr. Rev. Zool. 1843. p. 98.

Anabates *Temm.*†

Bill shorter than the head, broad at the base, much compressed on the sides, with the culmen slightly curved to the tip, which is entire, sometimes inflexed slightly over that of the lower mandible; the gonys long and advancing upwards; the nostrils basal, lateral, with the opening small and rounded. *Wings* moderate, with the first quill much shorter than the second, and the second rather shorter than the third and fourth, which are the longest. *Tail* long, graduated, and soft, with the ends of the feathers varying in form according to each species. *Tarsi* rather longer than the middle toe, and covered with broad scales in front. *Toes* short, with the outer toe longer than the inner, and both united at their base; the hind toe nearly as long as the middle toe, and strong; the claws moderate, strong, and much curved.

* It was in the *Isis* for 1832 that this genus was established by Wagler. *Serrirostrum* and *Uncirostrum* of D'Orbigny and Baron Lafresnaye (1837 and 1838), *Agrilorhinus* of the Prince of Canino (1838), and *Campylops* of M. Lichtenstein are synonymous.

† Established by M. Temminck in 1820 (*Manuel d'Ornithologie*). *Philydor* of Spix (1824), *Dendroma* of Mr. Swainson (1837), and *Anabacerthia* of Baron Lafresnaye, are synonymous.

It is in the warmer parts of South America that these birds reside, in bushy places on the sides of the rivers. They are sedentary, generally in small flocks of ten or twelve, dispersed in the neighbouring shrubs, on which they are constantly on the move, sometimes leaping from branch to branch, or hopping about on the ground round the stems of the thorny shrubs, which they seem to prefer to other kinds; these they search for minute insects and seeds. When perched, they erect their crests, and at the same time utter loudly without interruption a varied note.

1. A. *guianensis* (Gmel.) Temm. P. enl. 686. f. 2.
2. A. *amaurotis* Temm. Pl. col. 238. f. 2. — Xenops nigrocapillus (Mus. Par.) *Less.*
3. A. *striatus* Spix, Av. Bras. t. 83. f. 2. — Sphenura striolata *Spix.*
4. A. *subulatus* (Spix), Av. Bras. t. 83. f. 1.
5. A. *cristatus* Spix, Av. Bras. t. 84.
6. A. *gutturalis* D'Orb. & Lafr. Syn. Av. pl. ii. p. 15., Voy. dans l'Amér. Mér. Ois. t. 55. f. 3.
7. A. *unirufus* D'Orb. & Lafr. Syn. Av. pl. p. 16., Voy. dans l'Amér. Mér. Ois. t. 55. f. 1.
8. A. *leucophthalmus* Pr. Max. Beitr. iii. p. 1170. — Xenops gularis *Valenc.*; Sphenura sulphurascens *Licht.*; Philydor albogularis *Spix*, Av. Bras. ii. t. 74.
9. A. *erythrophthalmus* Pr. Max. Beitr. iii. p. 1175.
10. A. *atricapillus* Pr. Max. Beitr. iii. p. 1187. — Sphenura superciliaris *Licht.*; Philydor superciliaris *Spix*, Av. Bras. t. 73. f. 1.; Xenops melanocephalus *Less.*; Anabates canivetii *Less.* Cent. Zool. t. 16.
11. A. *macrourus* Pr. Max. Beitr. iii. p. 1182. — Sphenura striolata *Licht.*; Anabates striolatus *Temm.* Pl. col. 238. f. 1.
12. A. *ferruginolentus* Pr. Max. Beitr. iii. 1166.
13. A. *aradoïdes* Lafr. Mag. de Zool. 1832. t. 8.
14. A. *Boissonneautii* Lafr. Rev. Zool. 1840. 104.
15. A. ? *squamiger* D'Orb. & Lafr. Syn. Av. pl. ii. p. 14., Voy. dans l'Amér. Mér. Ois. t. 54. f. 2.
16. A. *gutturatus* D'Orb. & Lafr. Syn. Av. pl. ii. p. 4.
17. A. *ruficaudatus* D'Orb. & Lafr. Syn. Av. pl. ii. p. 15.
18. A. *certhioïdes* D'Orb. & Lafr. Syn. Av. pl. ii. p. 15.
19. A. *griseus* (Less.) Tr. d'Orn. p. 318.
20. A. *rufus* (Less.) Tr. d'Orn. p. 318.
21. A. *poliocephalus* (Licht.) — Philydor ruficollis *Spix*, Av. Bras. t. 75. — Anabates rufifrons *Val.*; Dendroma caniceps *Swains.*; Type of Dendroma *Swains.* (1837).
22. A. *auritus* Licht. Tschudi, Faun. Peruana, p. 34.
23. A. *montanus* Tschudi, Faun. Peruana, p. 35.
24. A. *ochrolæmus* Tschudi, Faun. Peruana, p. 35.
25. A. *melanorhynchus* Tschudi, Faun. Peruana, p. 35.
26. A. *striaticollis* Lafr.
27. A. *ruficollaris* Less. Cent. Zool. t. 36.
28. A. *leucophrus* Jard. & Selby, Ill. Orn. pl. 93.
29. A. *subcristatus* Swains. Braz. Birds, pl. 31.

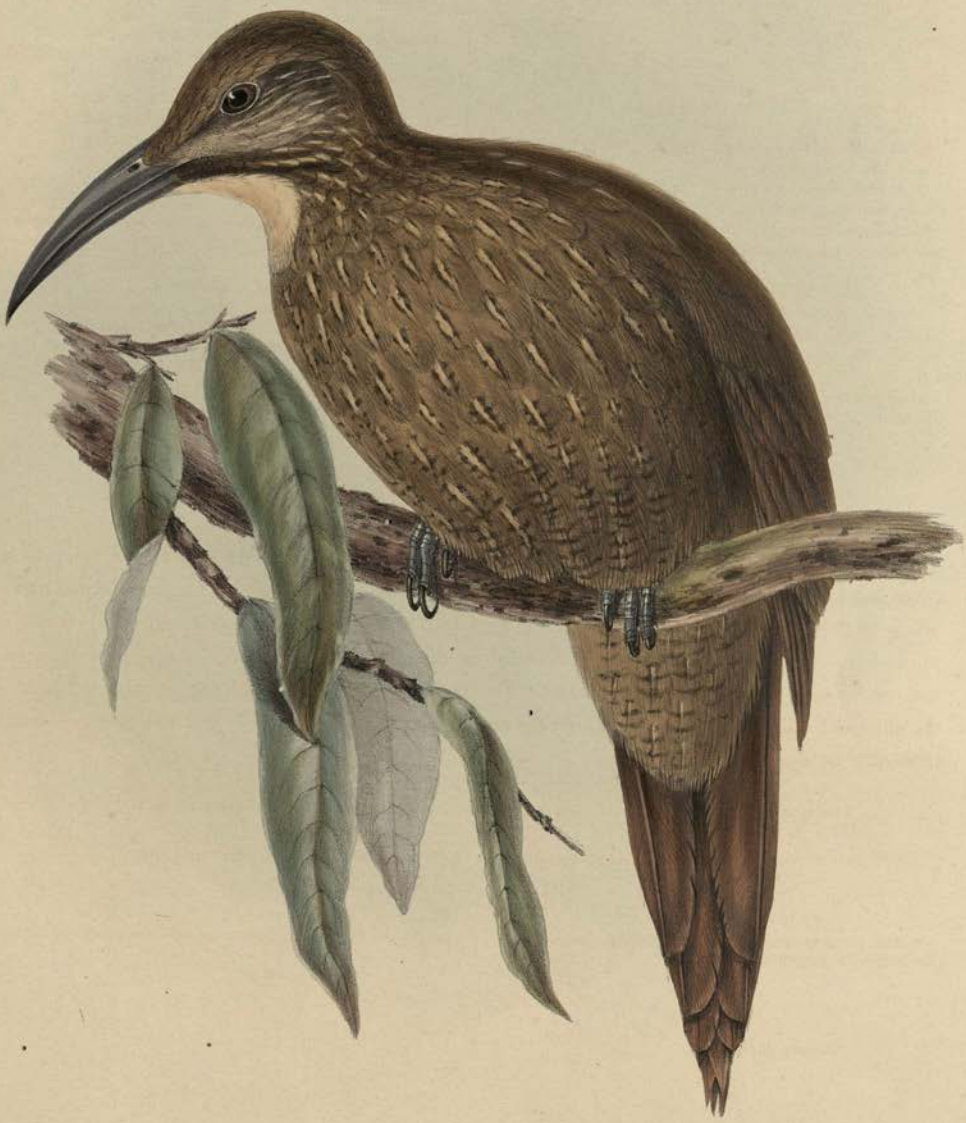
Oxyrhamphus *Strickl.**

Bill short, straight, triangular, and bare at the base, with the culmen straight to the tip, which is entire and acute; the nostrils basal, lateral, and membranous, with the opening longitudinal and narrow. *Wings* moderate and rather pointed, with the first quill shorter than the second and third, which are the longest. *Tail* moderate, even, and rounded on the sides. *Tarsi* strong, the length of the middle toe, and covered in front with broad scales. *Toes* moderate and strong, with the lateral toes equal, and the outer one united at its base; the hind toe rather shorter than the middle toe, and strong; the claws moderate, strong, and much curved.

The typical species of this division is peculiar to Brazil; but its habits and manners are unknown.

O. *flammiceps* (Temm.) Pl. col. 125. — Oxyrhynchus cristatus *Swains.* Zool. Ill. pl. 49.

* This genus was originally established under the name of *Oxyrhynchus* by M. Temminck; but, as that word was previously employed, Mr. Strickland changed it to the above.



Hullmandel & Walton Lithographers

DENDROCOLAPTES
lineatocephalus. G.R.Gray.

Wolf del et lith. Printed by Hullmandel & Walton.

1. XIPHORHYNCHUS procurvus *Ord.* 2. GLYPHORHYNCHUS cuneatus. 3. SITTASOMUS erythacus. 4. DENDROCOLAPTES decumanus.
5. DENDROCINCLA turdina. 6. PICOLAPTES(Brydgesii?).

The third Subfamily,

DENDROCOLAPTINÆ, or TREE-CREEPERS,

have the Bill of various length and form, more or less curved, and compressed on the sides to the tip, which is usually entire; the Nostrils basal, lateral, small, and exposed: the Wings moderate, and generally rounded: the Tail long, broad, and graduated; with the shaft of each feather prolonged beyond the web, and acute: the Tarsi moderate, strong, and broadly scaled: the Toes long; the outer toe rather longer than the middle one, and united for some distance from the base; the inner short, and slightly united at the base; the hind toe long: the Claws long, compressed, much curved, and acute.

DENDROCOLAPTES *Herm.**

Bill more or less long, straight, or curved from the base, which is broad, and the sides compressed to the tip; the gonys always long, ascending, or slightly curved; the nostrils basal and lateral, with the opening oval and partly closed by a membrane. *Wings* long, and rather pointed, with the fourth quill the longest. *Tail* long, broad, and rounded, with the end of the shaft prolonged beyond the web. *Tarsi* shorter than the middle toe, strong, and covered in front with broad scales. *Toes* long and strong; with the outer toe rather longer than the middle toe, and united for some distance from the base; the inner rather short, and slightly united at the base; the hind toe moderate; the claws long, compressed, much curved, and very acute.

These birds inhabit the vast forests of the warmer parts of South America. They are usually observed clinging to the trunks and branches of trees, by means of their strong curved claws, and the rigid points of their tail feathers; examining the cracks of the bark, and among the foliage, for the larvæ of insects and even those in a perfect state, on which they principally subsist. In fact their habits and manners closely assimilate to the Common Creeper. The female deposits from three to four eggs in hollow trunks of trees.

* Established by Hermann in 1804 (*Observationes Zoologicæ*, p. 135.). *Dendrocopus* of Vieillot (1816) is synonymous. It embraces *Dendroplex* of Mr. Swainson (1827), *Nasica* of M. Lesson (1831), and *Dendrocops* of Mr. Swainson (1837).

1. D. *cayannensis* (Linn.) Licht. Pl. enl. 621. — Gracula scandens *Lath.*; Dendrocolaptes major *Herm.*; Dendr. picumnus *Licht.* Vieill. Ois. dor. t. 79., Levaill. Prom. t. 26.; Dendr. communis *Less.* Tr. d'Orn. t. 72. f. 2.

2. D. *albicollis* (Vieill.) — Dendrocolaptes decumanus *Ill.* Licht. Berl. Trans. 1820. t. 1. f. 1., Azara, No. 241.; Dendrocolaptes picumnus (pt.) *Licht.*; Dendrocolaptes falcirostris *Spix*, Av. Bras. t. 87.

3. D. *cyanotis* Licht. Berl. Trans. 1818. p. 201., Levaill. Prom. t. 25.

4. D. *major* (Vieill.) N. Dict. d'Hist. Nat. xxvi. p. 118. — Dendrocolaptes rubiginosus *Lafr.* Mag. de Zool. 1833. Ois. t. 16.

5. D. *crassirostris* Such, Zool. Journ. ii. p. 115.

6. D. *platyrostris* Spix, Av. Bras. t. 89. — Type of Dendrocops *Swains.* (1837).

7. D. *fortirostris* Such, Zool. Journ. ii. p. 115.

8. D. *lineatocephalus* G. R. Gray.

9. D. *guttatus* Licht. Berl. Mus. 1818. p. 201. — Dendrocolaptes nigrirostris *Ill.*; Dendr. flammeus *Licht.* Levaill. Prom. t. 30.; Dendr. pardalotus *Vieill.* Azara, No. 242. ?

10. D. *melanocepś* Less. Rev. Zool. 1840. p. 269.

11. D. *chunchotambo* Tschudi, Faun. Pet. 22. f. 1.

12. D. *validus* Tschudi, Faun. Per. t. 21. f. 2.

13. D. *picus* (Gmel.) Licht. Pl. enl. 605.? — Dendrocolaptes minor *Herm.*; Oriolus picoïdes *Shaw*; Dendr. chrysolophus *Ill.*; Dendrocopus rectirostris *Vieill.* Levaill. Prom. t. 27., Azara, No. 243.; Type of Dendroplex *Swains* (1827).

14. D. *longirostris* Ill. Licht. Berl. Trans. 1818. p. 200. Levaill. Prom. t. 24. — Nasica nasalis *Less.*; Type of Nasica *Less.* (1831).

15. D. *griseicapillus* (Vieill.) N. Dict. d'Hist. Nat. xxvi. p. 119., Azara, No. 244.

16. D. *maculatus* (Vieill.) N. Dict. d'Hist. Nat. xxvi. p. 117.

17. D. *rufus* (Vieill.) N. Dict. d'Hist. Nat. xxvi. p. 119.

18. D. *fuscus* (Vieill.) N. Dict. d'Hist. Nat. xxvi. p. 117.

XIPHORHYNCHUS *Swains.**

Bill very long, much curved, slender, broad at the base, and suddenly compressed on the sides to the tip, which is entire. The other characters like those of the former genus.

It is in the warmer parts of South America that the species of this division are found.

1. X. *trochilirostris* (Licht.) Berl. Trans. 1818. p. 207. t. 3. — Dendrocolaptes procurvus *Temm.* Pl. col. 28.

2. X. *falcularius* (Vieill.) Encyc. Méth. p. 626., Gal. des Ois. t. 175.

3. X. ——? — Dendrocolaptes procurvus *D'Orb. & Lafr.* Syn. Av. p. 12.

PICOLAPTES *Less.*†

Bill long, rather slender, and curved for its entire length, with the sides much compressed to the tip, which is entire; the gonys very long, and curved; the nostrils lateral and basal, with the opening oval and partly closed by a membrane. *Wings* rather long and pointed, with the third quill the longest. The remaining characters are similar to those of the former divisions.

The species that compose this genus are found in the tropical parts of South America.

1. P. *angustirostris* (Vieill.) — Dendrocolaptes bivittatus *Licht.* Berl. Trans. 1820. t. 2. f. 2., Spix, Av. Bras. t. 90. f. 1., Azara, No. 242.; Picolaptes coronatus *Less.*; D. rufus *Pr. Max.*

2. P. *squamatus* (Licht.) Berl. Trans. 1820. t. 2. f. 1.

3. P. *tenuirostris* (Licht.) Berl. Trans. 1818. p. 202., Spix, Av. Bras. t. 91. f. 2. — Picolaptes Spixii *Less.*

4. P. *superciliosus* (Licht.) Berl. Trans. 1818. p. 204., Azara, No. 245. — Dendrocopus pyrrhophius *Vieill.*

5. ? P. *miniatus* (Ill.) Licht. Berl. Trans. 1818. p. 202., Azara, No. 246.

6. P. *obsoletus* (Ill.) Licht. Berl. Trans. 1818. p. 203. — Xiphorhynchus flavigaster *Swains.* ?

7. P. *Wagleri* (Spix), Av. Bras. t. 90. f. 2. — Xiphorhynchus leucogaster *Swains.* ?

8. P. *ocellatus* (Spix), Av. Bras. t. 91. f. 1.

9. P. ——? — Picolaptes guttata *Less.* Cent. Zool. t. 32.

10. P. *affinis* (Lafr.) Rev. Zool. 1839. p. 100.

11. P. *premeropirhynchus* (Lafr.) Rev. Zool. 1840. p. 270.

12. P. *albogularis* (King), Proc. Z. S. 1830. p. 30.

13. P. ——? Levaill. Prom. t. 29. f. 1.

* Established by Mr. Swainson in 1827 (*Zoological Journal*, p. 354.).

† M. Lesson established this genus in 1831 (*Traité d'Ornithologie*, p. 313.).

GLYPHORHYNCHUS *Pr. Max.**

Bill moderate, short, and rather broad at the base, with the culmen straight from the base for half its length, and then much depressed and curved downwards to the tip, which is obtuse; the sides slightly compressed, the lateral margins straight, and the gonys long and ascending; the nostrils basal, lateral, rather rounded, and exposed. *Wings* moderate; with the third, fourth, and fifth quills equal and longest. *Tail* long, broad, and graduated; with the end of the shafts turning outwards, and prolonged beyond the web. *Tarsi* as long as the middle toe, rather slender, and covered in front with broad scales. *Toes* long and slender; the outer toe as long as the middle toe, and united at its base; the hind toe rather short; the claws long, compressed, much curved, and acute.

The type of this genus is found in the vast forests of Brazil.

G. cuneatus (Licht.) Berl. Trans. 1818. p. 204. t. 3. f. 1., Guer. Mag. de Zool. 1833. Ois. t. 17., Spix, Av. Bras. t. 91. f. 3. | — Zenophasia platyrhyncha *Swains.*; Glyphorhynchus ruficaudus *Pr. Max.*

DENDROCINCLA.†

Bill nearly as long as the head, rather broad at the base, and slightly depressed, with the culmen slightly curved, and the sides gradually compressed to the tip, which is entire; the gonys long and ascending; the nostrils basal and lateral, with the opening oval and partly closed by a plumed membrane. *Wings* moderate and rounded, with the fourth and fifth quills equal and longest. *Tail* long, rather broad, and slightly rounded, with the ends of the feathers scarcely projecting beyond the web. *Tarsi* rather longer than the middle toe, and covered in front with broad scales. *Toes* rather long; with the outer and middle ones much united at their base, and nearly equal in length; the inner short, and slightly united; the hind toe long; the claws long, compressed, much curved, and acute.

These species inhabit the warmer portions of South America.

1. D. *turdina* (Licht.) Berl. Trans. 1818. p. 204. t. 2. f. 1.
2. D. *fumigata* (Licht.) Berl. Trans. 1818. p. 203., Levaill. Prom. t. 28. — Dendrocopus fuliginosus *Vieill.*
3. D. *merula* (Licht.) Berl. Trans. 1818. p. 208.
4. D. *Perrotii* (Lafr.) Rev. Zool. 1844. p. 80.
5. D. *atrirostris* (D'Orb. & Lafr.) Syn. Av. p. 12.

SITTASOMUS *Swains.*‡

Bill moderate and straight, with the culmen slightly curved, and the sides compressed to the tip, which is entire; the gonys moderate and ascending. *Wings* moderate and rather pointed, with the

* Established by the Prince of Neuwied in 1831 (*Beitr. zur Naturg.* ii. p. 1149.). *Sittacilla* of M. Lesson (1831) and *Zenophasia* of Mr. Swainson (1831) are synonymous.

† The Prince of Neuwied established this genus under the name of *Dryocopus* in 1831, which, having been previously employed, was changed by me to the above word in 1840.

‡ It was in the *Zoological Journal* (p. 355.) for 1827, that Mr. Swainson established this genus.

third quill the longest. *Tail* long and broad, with the end of each shaft curved outwardly and acute. The other characters like those of the former genus.

It is in the tropical portions of South America, that the two species of this division are found.

1. S. *erythacus* (Licht.) Berl. Trans. 1820. p. 266. t. 1. f. 2, 3. — Dendrocolaptes sylvioïdus *Temm.* Pl. col. 72. f. 1.; Neops spirurus *Vieill.*; Sittasomus Temminckii *Less.*; Dendr. xenops *Temm.*; Sitt. olivaceus *Pr. Max.*

2. S. ? *flammulatus* (Less.) Tr. d'Orn. p. 25.

February, 1847.

Hullmandel & Walton Lithographers

1. *SALPORNIS spilonota (Frankl.)*

2. *CAULODROMUS Gracei G.R.Gray.*

CERTHINÆ.

ORTHONYCINÆ.

Wolf sculpt. imp. Printed by Hullmandel & Walton

TICHODROMA muraria. 2. CLIMACTERIS leucophea. 3. SALPORNIS spilonota. 4. CAULODROMUS Gracei. 5. CERTHIA familiaris.
6. ORTHONYX spinicauda.

The fourth Subfamily,

CERTHINÆ, or CREEPERS,

have the Toes very long and slender; the outer toe longer than the inner, united beyond the first joint, and the inner toe as far as the first joint, of the middle toe; the hind toe very long, and slender: the Claws long, much compressed, and curved.

CERTHIA *Linn.**

Bill moderate, slender, and curved throughout its length, with the sides compressed to the tip, which is entire and acute; the gonys long and curved; the nostrils basal, lateral, and sunken, with the opening in the forepart of the groove, lunate, and partly covered by a membranous scale. *Wings* moderate and rounded; with the first quill short, and the fourth and fifth quills equal and longest. *Tail* long and graduated; with the ends of the feathers rigid and acute. *Tarsi* shorter than the middle toe, and slender. *Toes* long and slender; the inner toe shorter than the outer, both more or less united at the base; the hind toe long and slender; the claws long, much curved, and acute.

The species are found in Europe, Asia, and the temperate parts of North America. They are usually observed wherever trees are abundant, climbing on the trunks, generally commencing from the base, and moving rapidly upwards in a straight or in a spiral direction round the tree, using their stiff-pointed tail to assist them in the ascent. Sometimes they are noticed on the branches, and they are often seen running along the lower surface with very great dexterity. Their object in searching the trunks and branches is for the purpose of obtaining the insects which lie concealed in the holes and crevices of the bark.

1. C. *familiaris* Linn. Pl. enl. 681. — Certhia scandulaca *Pall.* Gould, B. of Eur, pl. 237.; C. Nattereri *Pr. Bonap.* ? Wils. Amer. Orn. pl. 8. f. 1.; C. americana *Pr. Bonap.*, Audub. B. of Amer. pl. 419.

2. C. *himalayana* Vigors, Proc. Z. S. 1831. p. 174. — Certhia asiatica *Swains.* Two Cent. and a Quart. p. 353.

CAULODROMUS.

Bill longer than the head, broad, and rather depressed at the base, slender, and curved throughout its length, with the sides much compressed from the nostrils to the tip, which is obtuse, and slightly

* Established in 1835 by Linnæus.

emarginated; the gonys long and curved; the nostrils lateral, placed anteriorly in a short broad groove, with the opening large, rounded, and exposed. *Wings* short, covering the base of the tail, and much rounded; with the sixth quill the longest. *Tail* very short; with the ends of the feathers rather pointed. *Tarsi* shorter than the middle toe, and covered in front with broad transverse scales. *Toes* long and slender; with the outer toe longer than the inner, and united at the base; the inner toe very slightly united; the hind toe long, and armed with a long, curved, and acute claw.

The type of this genus is found at Darjeeling.

C. *Gracei* G. R. Gray, Proc. Z. S. 1847. p. .

Salpornis.

Bill long, broad, and rather depressed at the base, and curved for its entire length, with the sides much compressed from the nostrils, and the gonys lengthened and curved; the nostrils lateral, and placed anteriorly in a short broad groove, with the opening large and exposed. *Wings* very long, reaching nearly to the end of the tail, and pointed; with the first quill very short, and the second nearly as long as the third and fourth, which are equal and longest. *Tail* rather short, and even; with the ends of the feathers rounded. *Tarsi* shorter than the middle toe, and covered in front with broad scales. *Toes* long and strong; the inner toe shorter than the outer, and slightly united at its base, the latter united beyond the first joint; the hind toe long, strong, and armed with a strong curved claw.

It is in India that the type of this division is found, but its habits and manners are unknown.

S. *spilonota* (Frankl.) Proc. Z. S. 1831. p. 121.

Tichodroma *Ill.**

Bill lengthened, rather curved, and slender; with the base rather depressed and broad, and the sides compressed from the nostrils to the tip, which is entire; the gonys long, and slightly ascending; the nostrils basal, lateral, and sunken, with the opening covered by a membranous scale. *Wings* long, and rather rounded; with the first quill short, and the fourth and fifth equal and longest. *Tail* short, and emarginated; with the ends of the feathers rather soft. *Tarsi* shorter than the middle toe, and slender. *Toes* long and slender; with the outer toe longer than the inner, and both united at their base; the hind toe long and slender; the claws long, curved, and acute, especially that of the hind toe.

* Established by Illiger in 1811 (*Prodromus Syst. Mamm.* p. 210.). *Petrodroma* of Vieillot (1816) is synonymous.

The type of this genus is found in the mountainous parts of Europe and Asia. It is usually seen flitting from one projection of a rock to another, and hopping up and down the sides of them in continual search after its favourite food, which consists chiefly of spiders and their eggs, and also of various kinds of insects. Sometimes these birds are noticed hanging on the face of a ruined wall by means of their strong curved claws, while seeking their food.

T. *muraria* (Linn.) Pl. enl. 872. — Tichodroma phœnicoptera *Temm.*; T. europæa *Steph.* Gould, B. of Eur. pl. 239.

Climacteris *Temm.**

Bill rather short, slender, and slightly depressed at the base, with the culmen curved, and the sides compressed to the tip, which is entire; the gonys moderate and slightly ascending; the nostrils basal, lateral, and sunken, with the opening partly covered by a membranous scale. *Wings* rather long, and pointed; with the first quill short, and the third and fourth equal and longest. *Tail* moderate, broad, and even. *Tarsi* nearly the length of the middle toe. *Toes* long and rather strong; the inner toe shorter than the outer, both more or less united at the base; the hind toe long, and rather slender; the claws long, much curved, compressed, and acute.

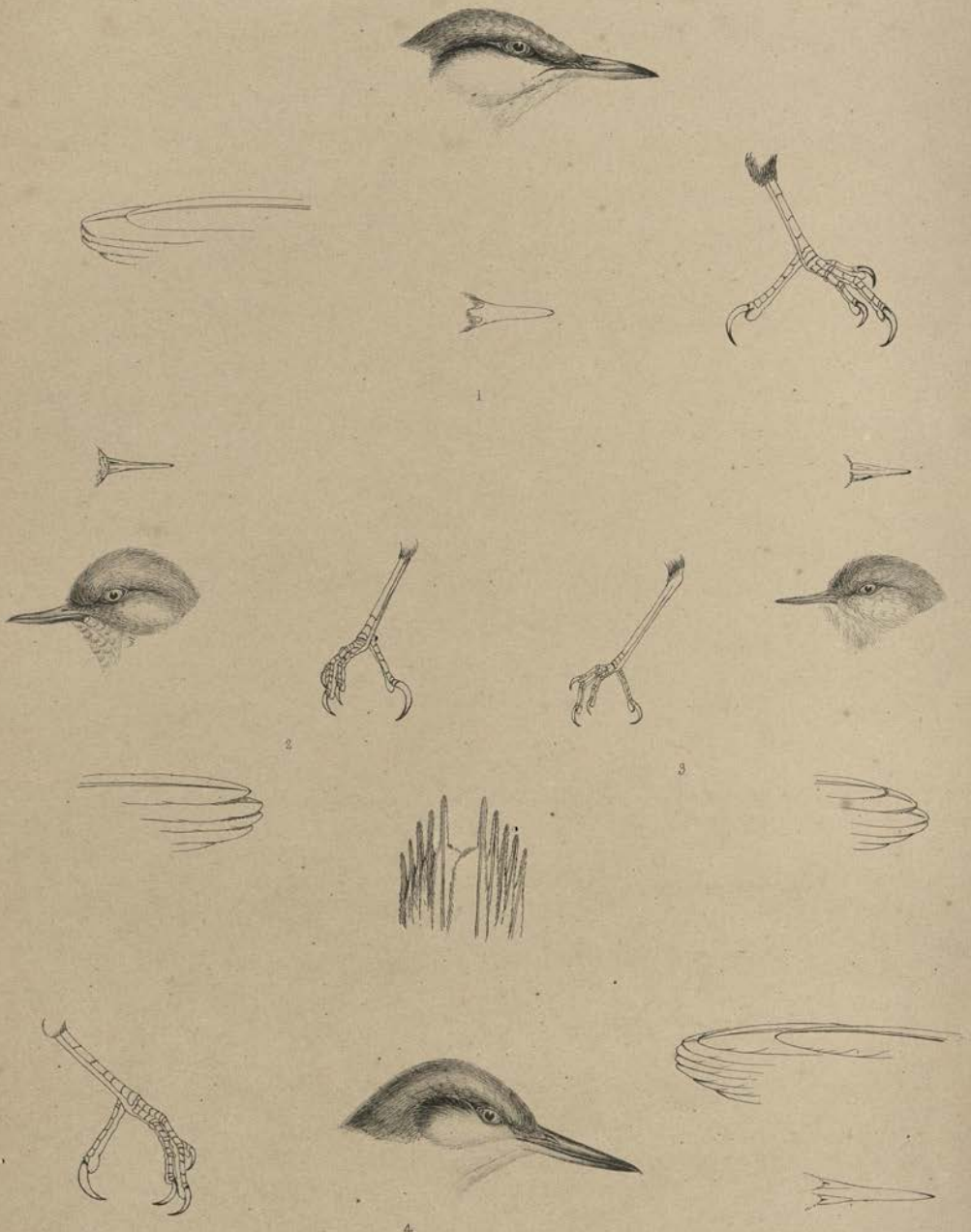
The species of this genus are found in the vast continent of Australia, where they inhabit the thinly wooded districts; and are observed actively climbing up the trunks of various trees or along the branches, examining the crevices and holes in the bark; sometimes they creep into the hollows of the dead branches, and even penetrate with their bills into the decayed parts for their food, which is composed of various kinds of insects and spiders, both in the perfect and imperfect states. For these they also search the ground at the base of the trees, where they move about with shuffling actions. Their flight from tree to tree is performed in a skimming manner, and if disturbed they utter a sharp cry. The nest is composed of hairs or of grass, lined with feathers, and is usually placed in a hollow branch. The eggs are generally two or three in number.

1. C. *leucophæa* (Lath.) Strickl. Lamb. Icon. ined. ii. 45. — Climacteris picumnus *Temm.* Pl. col. 281. f. 1.; Glycyphila ocularis et G. subocularis *Gould.* ?
2. C. *scandens* Temm. Pl. col. 281. f. 2. — Petrodroma Bailloni *Vieill.* Kittl. Kupf. Vog. t. 6. f. 1.
3. C. *erythrops* Gould, Proc. Z. S. 1840. p. 148.
4. C. *rufa* Gould, Proc. Z. S. 1840. p. 149.
5. C. *melanura* Gould, Proc. Z. S. 1842. p. 138.
6. C. *melanotus* Gould, Proc. Z. S. 1846. p. .

* Established in 1820 by M. Temminck (*Analyse du Syst. Gén. d'Ornith.* p. lxxxv.).

C. Hullmandel's Patent Lithogrst.

SITTA
flavipes Sw.



C. Hullmandel's Patent Lithotint.

1. SITTA Europæa. 2. SITTELLA chrysoptera. 3. ACANTHISITTA chloris. 4. DROMODENDRON leucosternum.

The fifth Subfamily,

SITTINÆ, or NUTHATCHES,

have the Toes long and slender, with the outer toe shorter than the middle one, and united at the base to the first joint; the inner toe shorter than the outer one, and united slightly at the base.

SITTA *Linn.**

Bill moderate, slender, straight, and the sides compressed, with the culmen slightly curved to the tip, which is cuneate and entire, and the gonys long and advancing upwards; the nostrils basal, lateral, rounded, sunk in a broad groove, partly closed by a membrane, and generally covered by the projecting frontal plumes and short bristles. *Wings* reaching nearly to the end of the tail, with the first quill very short, and the second shorter than the third and fourth, which are the longest. *Tail* short, broad, and nearly even. *Tarsi* shorter than the middle toe, and strong. *Toes* long, with the outer toe longer than the inner, and united to the first joint, the inner slightly united at the base; the hind toe longer than the middle one, and all armed with an acute, long, and curved claw.

These birds are scattered throughout Europe and North America, and some species have been found in various parts of India and its archipelago. They prefer the forests or the dense woods, where they are often observed moving rapidly about on the trunks of trees, running both upwards and downwards in spiral circles, or turning round the small branches with equal facility, probing into the various cracks of the bark, and occasionally removing pieces, in search of spiders and other insects. In severe weather they sometimes approach the habitation of man, when they do not refuse to feed on grains. The seeds of the pine cone, and the kernels of filberts and hazel nuts, also form a portion of their subsistence; these latter they break by placing one in a chink, and turning it on all sides to strike with their bill until they have made a sufficient hole in it to obtain the kernel. When roosting, these birds are stated to sleep with the head and back downwards. The hole of a tree, or the deserted nest of a woodpecker, is selected by the female as a place to deposit her eggs. The nest is entirely composed of dead leaves, especially those of the oak.

1. S. *europæa* Linn. Pl. enl. 623. f. 1., Gould, B. of Eur. pl. 234. — Sitta cæsia *Wolf & Meyer.*

2. S. *syriaca* Ehrenb. Symb. Phys. — Sitta rupestris *Temm.* Gould, B. of Eur. pl. 235.; S. Neumeyeri *Michad.*; S. saxatilis *Schinz.*

3. S. *uralensis* Licht. in Glog. Handb. p. 377. — Sitta asiatica *Temm.* Gould, B. of Eur. pl. 236.; S. europæa var. sibirica *Pall.*

4. S. *carolinensis* Lath. Wils. Amer. Orn. pl. 2. f. 3., Aud. B. of Amer. pl. 152. — Sitta melanocephala *Vieill.* Gal. des Ois. t. 171.

5. S. *canadensis* Lath. Pl. enl. 623. f. 2. — Sitta varia *Wils.* Amer. Orn. pl. 2. f. 4., Aud. B. of Amer. pl. 105.

6. S. *pusilla* Lath. Wils. Amer. Orn. pl. 15. f. 2., Audub. B. of Amer. pl. 125. — Sitta carolinensis minor *Briss.*

7. S. *pygmæa* Vigors, Zool. Beechey's Voy. p. 25. pl. 4. f. 2., Aud. B. of Amer. pl. 419.

* Established by Linnæus in 1755 (*Systema Naturæ*). It embraces *Orthorhynchus* of Dr. Horsfield, which is coequal with *Dendrophila* (1837) of Mr. Swainson.

8. S. *castaneoventris* Frankl. Proc. Z. S. 1831. p. 121., Jard. & Selby, Ill. Orn. pl. 145. — S. castanea *Less.*

9. S. *cinnameoventris* Blyth, J. A. S. Beng. 1842. p. 459. — Sitta castaneoventris *Hodgs.*

10. S. *himalayensis* Jard. & Selby, Ill. Orn. pl. 146.

11. S. *nipalensis* Hodgs. J. A. S. B. 1836. p. 779. — Sitta viticauda *Jam.* Mem. Wern. Nat. Hist. Soc. vii. 490. ?

12. S. *frontalis* Horsf. — Sitta velata *Temm.* Pl. col. 72. f. 3., Swains. Ill. Orn. pl. 2.; S. corallina *Hodgs.*; Type of Orthorhynchus *Horsf.*

13. S. *flavipes* (Swains.) Two Cent. and a Quart. p. 323. — Sitta azurea *Less.* ? S. gymnophrys *Kuhl,* MS.

13. S. *formosa* Blyth, J. A. S. B. 1843. p. 938.

Sittella *Swains.**

Bill long, rather slender, with both mandibles slightly curved upwards from the base, the tip slightly curved and emarginated, the sides compressed, and the gonys lengthened and curved upwards; the nostrils basal and lateral, and placed in a membranous groove, with the opening linear and near the lateral margin. *Wings* reaching beyond the tail, with the first quill nearly as long as the second and third, which are the longest. *Tail* very short, and somewhat rounded. *Tarsi* shorter than the middle toe, and covered in front by an almost entire scale. *Toes* moderate, with the lateral toes unequal, the outer the longest, and both united at their base to the first joint of the middle toe, the hind toe as long as, or longer than, the middle one; the claws long, compressed, and curved.

The species of this genus are peculiar to Australia. They live, says Mr. Gould, in small companies, running over the branches, and up and down the trunks of the trees, with the greatest activity, and assuming every possible variety of position; when proceeding downwards the head points to the ground. They search the branches and trunks of the trees for the insects and spiders that may lodge on them, and these form their chief subsistence. Their flight is quick and sudden, but is seldom brought into action further than to pass from one tree to another; while so engaged they utter a weak piping note, which they also do while running up and down the trunk. The nest of one of the species is said to be made "of short strips of bark attached together and fastened to the branch with cobwebs, and so covered over with them as to be very nearly smooth; the cobwebs are laid or felted on, not wound round the pieces; portions of lichen are frequently attached. The nest is generally placed in the highest branches, and is most difficult to detect, from its very diminutive size and from its resembling a slight excrescence of the wood; the eggs are three in number."

1. S. *chrysoptera* (Lath.) Swains. Lath. Gen. Syn. of B. pl., Lamb. Icon. ined. iii. 6., Gould, Syn. B. of Austr. pl. f. 2. (head).

2. S. *pileata* Gould, Proc. Z. S. 1837. p. 151. — Sitta melanocephala *Gould,* Syn. B. of Austr. pl. f. 3. & 4. (heads), B. of Austr. pl.

3. S. *leucocephala* Gould, Proc. Z. S. 1837. p. 152., Syn. B. of Austr. pl. f. 1. (head).

4. S. *leucoptera* Gould, Proc. Z. S. 1839. p. 144., Gould, B. of Austr. pl.

Acanthisitta *Lafr.*†

Bill long, straight, and very slender, with the culmen straight and slightly curved at the tip, the sides compressed and the gonys long and gradually advancing upwards; the nostrils basal, lateral, and placed in a deep broad groove, with the opening linear and near the culmen. *Wings* moderate, with

* Mr. Swainson established this genus in 1837. (*Class. of Birds,* ii. p. 317.)

† This genus was established by Baron Lafresnaye in 1843. (*Mag. de Zool.* 1843.)

the third and fourth quills the longest, the first shorter than the second, which is shorter than the third and fourth. *Tail* short and rounded. *Tarsi* shorter than the middle toe, and covered in front with an almost entire scale. *Toes* long and very slender, the lateral toes unequal, the outer longest and united at its base, the hind toe nearly as long as the middle one; the claws long, compressed, and curved.

The two species of this genus are peculiar to New Zealand, where they are found on the bushes, searching the branches and leaves for minute insects, both in their mature and larva states.

1. A. *longipes* (Gmel.) G. R. Gray, Zool. of Ereb. and Terr. Birds, pl. 3. f. 1., Forst. Desc. Anim. p. 88. et Icon. ined. 163.
2. A. *chloris* (Sparr.) G. R. Gray, Zool. of Ereb. and Terr. Birds, pl. 3. f. 2., Sparr. Mus. Carls. pl. 33. — Acanthiza tenuirostris *Lafr.* Rev. Zool. 1841. p. 242., Mag. de Zeol. 1842. Ois. t. 27.; Motacilla citrinella *Forst.* Desc. Anim. p. 89., et Icon. ined. 164.; M. citrina *Gmel.*; Sitta punctata *Quoy et Gaim.* Voy. de l'Astrol. i. 221., Ois. t. 18. f. 1.

Dromodendron.*

Bill long, much compressed on the sides, with the culmen straight, and the lateral margin advancing upwards to the tip, which is acute, the gonys lengthened and curved upwards; the nostrils basal, lateral, small, and linear, partly closed by a membrane, and hidden by the frontal plumes. *Wings* long, with the third and fourth quills the longest. *Tail* long and rounded, with the shaft of each feather prolonged and rigid. *Tarsi* shorter than the middle toe, robust, and covered with transverse scales. *Toes* long and slender, with the lateral ones unequal, the outer toe the longest, and both united at their base to the first joint of the middle toe; the hind toe nearly as long as the middle toe, strong and armed with a long, strong, and curved claw.

Mr. Darwin informs us that this bird is common in the forests of Chiloe, and in the woods south of Valparaiso. It may be constantly seen running up the trunks of the lofty trees, and its food consists of coleopterous insects.

D. *leucosternum* Gould, Voy. of Beagle, Birds, pl. 27.

* Mr. Gould established this genus under the name of *Dendrodromus* in 1839, which, having been employed, was changed by me to the above appellation in 1842.

March, 1846.

PICOLMSON TESTIM

Hullmandel & Walton's new Process

ORTHONYX
ochrocephalus (Gm.)

The sixth Subfamily,

ORTHONYCINÆ, or MOHOUAS

have the Toes long and very strong; the outer toe nearly as long as the middle one, and united slightly at the base; the hind toe moderate and very strong; the Claws remarkably long, strong, slightly curved, and acute.

ORTHONYX *Temm.**

Bill rather short, and nearly straight, with the culmen elevated at base, and curved to the tip, which is slightly emarginated; the sides compressed, and the lateral margins slightly curved; the gonys moderate and ascending; the gape furnished with weak bristles; the Nostrils basal, and placed in a broad groove, partly closed by a membrane, leaving the opening exposed. *Wings* short and rounded, with the fourth quill nearly as long as the fifth and sixth, which are equal and longest. *Tail* long and broad, with the shaft of each feather prolonged beyond the web, and rather strong. *Tarsi* strong, longer than the middle toe, and covered in front with broad scales. *Toes* moderate and strong; with the outer toe nearly as long as the middle one, and united at the base; the hind toe long and strong; the claws long, very strong, compressed, and acute.

The species of this division are found in the islands of the South Seas, and also in New Zealand. They are usually observed climbing the trunks of trees, while searching for their food, which chiefly consists of small insects, although they occasionally feed on minute seeds.

1. O. *spinicauda* Temm. Pl. col. 428. — Orthonyx maculatus *Steph.*; O. Temminckii *Vig. & Horsf.*
2. O. *ochrocephala* (Gmel.) — Muscicapa chloris *Forst.* Desc. Anim. p. 87., Icon. ined. 157.; Certhia heteroclites *Quoy & Gaim.* Voy. de l'Astr. Ois. t. 17. f. 1.; Orthonyx icterocephalus *Lafr.* Mag. de Zool. 1840, Ois. t. 8.; Mohoua hua *Less.*; Type of Mohoua *Less.* (1837.)

* M. Temminck established this genus in 1820. *Mohoua* of M. Lesson (1837) is synonymous.

October, 1847.

Hallmandel & Walton, Lithographers.

1. TESIA
castaneo-coronata (Burt)

2. RHAMPHOCÆNUS
rufirostris (Pr. Bonap)

The seventh Subfamily,

MENURINÆ, or WRENS,

have the Bill more or less long and slender, with the culmen usually slightly curved, and the sides compressed to the tip, which is scarcely emarginated; the Nostrils lateral, with the opening protected by a horny scale or membrane: the Wings more or less short and rounded: the Tail of various lengths, but generally rounded: the Tarsi more or less long and slender: the Toes generally long; with the outer toe longer than the inner, and slightly united at the base; the hind toe long and strong: the Claws long, and more or less curved.

MENURA *Davis.**

Bill moderate, strong, broad, and rather depressed at the base, with the culmen keeled, sloping, and the sides compressed to the tip, which is emarginated; the gonys short and ascending; the nostrils large, and placed in a sunken broad triangular groove, with the opening linear, and partly closed by a membrane. *Wings* moderate and rounded; with the sixth to the ninth quills equal and longest. *Tail* very long, and of singular form, differing in the sexes. *Tarsi* much longer than the middle toe, robust, and covered in front with broad scales. *Toes* long and strong; the lateral ones nearly equal, the outer toe united at the base, the inner free: the hind toe long and strong: the claws very long, strong, and rather obtuse.

The typical species which forms this genus is found in various parts of Australia. It inhabits in pairs the brushes on the coast, and those that cover the sides of the mountains in the interior, and seems to prefer those that are the most inaccessible and precipitous. It is difficult to observe their habits on account of their great shyness and caution, which induce them to conceal themselves among the thick brushwood, although their loud and liquid calls are continually being heard amongst it. Sometimes, however, it has been noticed on the newly cut roads which have been formed through the brushes, where, if disturbed, it will immediately leap upon a fallen trunk of a tree, and remain watching its enemy for a short time, and then suddenly disappear; or it runs at once rapidly into the underwood, where it is soon lost sight of. "It possesses a singular habit," says Mr. Gould, "of forming small round hillocks, which are constantly visited during the day, and upon which the male is continually trampling, at the same time erecting and spreading out his tail in the most graceful manner, and uttering his various cries, sometimes pouring forth his natural notes, at others mocking those of other birds, and even the howling of the native dog or dingo." The early morning and the evening are the periods when it is most animated and active. Their food is procured by scratching among the fallen leaves, and consists of various kinds of insects and small molluscous animals. "The nest is," remarks Mr. Gould, "placed on the edge of a projecting rock, at the base of a tree, or on the top of a stump. It is deep and shaped like a basin, and had the appearance of having been roofed; it is formed outwardly of sticks, and lined with the inner bark of trees and fibrous roots." The eggs are supposed not to exceed two in number.

M. *superba* Dav. Linn. Trans. vi. p. 207. pl. 22. — Menura Lyra *Shaw*, Gal. des Ois. t. 192.; M. novæ hollandiæ *Lath.*; M. vulgaris *Flem.*; M. paradisea *Swains.*; Parkinsonius mirabilis *Bechst.* Vieill. Ois. dor. t. 14, 15.

* Established by Gen. Davis in 1800 (*Linn. Trans.* vi. p. 207.). *Parkinsonius* of M. Bechstein is synonymous.

Hylactes *King*.*

Bill short and strong, with the culmen elevated at the base, much curved, and the sides much compressed to the tip, which is slightly emarginated; the lateral margins slightly curved, and the gonys short and ascending; the nostrils lateral, and placed in a short broad groove, with the opening concealed by a horny scale. *Wings* short and rounded, with the fourth and fifth quills equal and longest. *Tail* rather short and rounded. *Tarsi* robust, as long as the middle toe, and covered in front with transverse broad scales. *Toes* long and very robust; with the lateral toes nearly equal, the outer toe united at the base, and the inner toe free; the hind toe long and strong; the claws very long, strong, slightly curved, and obtuse.

The species of this genus are found on the west coast of South America, between 41° and 50° of south latitude. They are known to be present in the forests or on the coast by their remarkable cry, which in one species has been compared to the barking of a small dog. Their extreme shyness causes them to hide continually in the bushes, although at times they may be observed standing on the trunks of dead trees, with their tails erect over their backs. Insects and seeds, which they seek for on the ground, form their chief food. They rarely take wing, and then only for a short distance at a time. The nest is generally built among rotten sticks, close to the ground; but sometimes it is placed in a deep burrow, which they excavate in the ground.

1. H. *Tarnii* King, Proc. Z. S. 1830. p. 15. — Megalonyx ruficeps *D'Orb.*, Voy. dans Amér. Mér. Ois. t. 8. f. 1.
2. H. *megapodius* (Kittl.) Mém. de l'Acad. St. Petersb. t. 4. — Megalonyx rufus *Less.* Cent. de Zool. t. 66.; Leptonyx macropus *Swains.* Zool. Ill. n. s. pl. 117.

Rhinocrypta.†

Bill moderate and strong, with the culmen gradually curved, and the sides compressed to the tip, which is slightly emarginated; the lateral margins curved, and the gonys short and ascending; the nostrils lateral, and placed in a short rather broad groove, with the opening entirely covered by a horny scale. *Wings* short and rounded, with the fourth and fifth quills equal and longest. *Tail* long, broad, and rounded. *Tarsi* moderate, longer than the middle toe, robust, and covered by broad scales. *Toes* long and robust; the outer toe longer than the inner one, and slightly united at the base; the hind toe short; the claws rather long, slender, curved, and acute.

The type of this genus is found in Chili, where it lives in the lower branches of the hedges or thickets, and, if alarmed, quickly hides among the foliage, and reappears in a fresh place at a little distance. It often utters a loud and singular cry, and rarely takes to flight even amidst its greatest fears.

R. *lanceolata* (D'Orb. & Lafr.) Voy. dans l'Amér. Mér. Ois. t. 7. f. 1., Mag. de Zool. 1832. Ois. t. 3., Buff. Compl. Ois. t. 26. f. 2.

* Established by Capt. King in 1830 (*Proc. Zool. Soc.* 1830. p. 15.). *Megalonyx* of M. Lesson (1830) is synonymous.

† This genus was originally established by MM. D'Orbigny and Isidore Geoffroy under the name of *Rhinomya* (1832), which, having been previously used, was changed by me to the above in 1841.

Pteroptochos *Kittl.**

Bill short and slender, with the culmen elevated at the base, more or less curved, and the sides compressed to the tip, which is emarginated; the nostrils lateral, with the opening linear, and covered by a large horny scale. *Wings* short and rounded, with the fourth to the seventh quills nearly equal and longest. *Tail* more or less long, and rounded. *Tarsi* longer than, or as long as, the middle toe, rather slender, and covered in front with broad transverse scales. *Toes* moderate and slender; the lateral toes unequal, and shorter than the middle one; the outer toe longer than the inner one, and united at the base; the hind toe long; the claws moderate, compressed, and curved.

The species are found in the tropical parts and on the western coast of South America. Their manners and habits are too much like those of the Hylactes to require a repetition of them.

1. P. *albicollis* Kittl. Mém. de l'Acad. St. Petersb. t. 3., D'Orb. Voy. dans l'Amér. Mér. t. 8. f. 2. — Megalonyx medius *Less.* Zool. Ill. pl. 60.
2. P. *rubecula* Kittl. Mém. de l'Acad. St. Petersb. t. 2., D'Orb. Voy. dans l'Amér. Mér. Ois. t. 7. f. 3. 4.
3. P. *ater* Less. Cent. Zool. t. 30. — Malacorhynchus cristatellus *Ménétr.* Mém. de l'Acad. St. Petersb. 1835. t. 12.; Platyurus corniculatus *Swains.* B. of Braz. pl. 55, 56.; Type of Merulaxis *Less.* (1830).
4. P. *affinis* (Swains.) B. of Braz. pl. 57.
5. P. *magellanicus* (Lath.) Forst. Desc. Anim. p., Icon. ined. 163. — Scytalopus fuscus *Gould,* Jard. & Selby, Ill. Orn. n. s. pl. 12.; Platyurus niger *Swains.*; Type of Scytalopus *Gould* (1836).
6. P. *albiventris* (Ménétr.) Mém. de l'Acad. St. Petersb. 1835. t. 13. f. 2. — Scytalopus albogularis *Gould,* Jard. & Selby, Ill. Orn. n. s. pl. 20.
7. P. *speluncæ* (Ménétr.) Mém. de l'Acad. St. Petersb. 1825. t. 13. f. 1.
8. P. *rhinolophus* (Pr. Max.) Beitr. iii. p. 1051.
9. P. *indigoticus* (Pr. Max.) Beitr. iii. p. 1091.
10. P. *chilensis* Kittl. — Troglodytes paradoxus *Kittl.* Mém. de l'Acad. St. Petersb. 1831. t. 5.; Platyurus lepturus *Swains.*
11. P. *griseicollis* (Lafr.) Rev. Zool. 1840. p. 103.
12. P. *squamiger* (Lafr.) Rev. Zool. 1840. p. 103.
13. P. ——? Voy. au Pole Sud, Ois. t. 19. f. 5.
14. P. *nanus* (Less.) Rev. Zool. 1842. p. 135.
15. P. *rufocapillus* (Less.) Rev. Zool. 1842. p. 209.
16. P. *senilis* (Lafr.) Rev. Zool. 1840. p. 103.
17. P. *analis* (Lafr.) Rev. Zool. 1840. p. 103.
18. P. *orthonyx* (Lafr.) Rev. Zool. 1843. p. 131., Mag. de Zool. 1844. Ois. t. 53.
19. P.? *guttatus* (Less.) Rev. Zool. 1840. p. 274. — Type of Sylviaxis *Less.* (1840).

Cyphorhinus *Cabanis.*†

Bill moderate and straight, with the culmen elevated and keeled between the frontal feathers, and sloping to the tip, which is entire; the sides much compressed, and the gonys long and ascending; the nostrils lateral, and placed in a broad membranous groove, with the opening in the middle of the membrane, large, exposed, and rounded. *Wings* rather short, and rounded; with the fifth and sixth quills equal and longest. *Tail* short and rounded. *Tarsi* longer than the middle toe, with the front covered with very broad transverse scales. *Toes* slender; the middle toe long, the lateral toes rather short and equal, the hind toe very long and slender; the claws moderate, weak, and slightly curved, that of the hind toe very long and slender.

* Established by M. Kittlitz in 1830 (*Mém. de l'Acad. St. Petersb.* 1831. t. 1. p. 178.). *Merulaxis* of M. Lesson (1830), *Leptonyx* (1832) and *Platyurus* (1837) of Mr. Swainson, *Malacorhynchus* of M. Ménétriés (1834), and *Scytalopus* of Mr. Gould (1836) are synonymous with the name employed. It probably embraces *Sylviaxis* of M. Lesson (1840).

† Established by M. Cabanis in 1844 (*Tschudi, Fauna Peruana,* p. 22.).

The species are inhabitants of the warm and humid parts of South America. They possess a remarkably sweet and powerful song.

1. C. *thoracicus* Tschudi, Fauna Peruana, p. 22. t. 16. f. 1.
2. C. *carinatus* (Swains.) B. of Braz. pl. 14.
3. C. ? *musicus* (Bodd.) Pl. enl. 706. f. 2. — Turdus cantans *Gmel.*; T. arada *Lath.*

Tesia *Hodgs.**

Bill moderate and slender, with the culmen gradually curved, and the sides compressed to the tip, which is slightly emarginated; the gonys long and slightly ascending; the nostrils lateral, and placed in a broad groove, with the opening concealed by a large horny scale. *Wings* short and rounded, with the fifth and sixth quills equal and longest. *Tail* very short. *Tarsi* longer than the middle toe, and slender, with the front covered by an entire scale. *Toes* long and slender; the lateral toes equal, and the outer toe slightly united at the base; the hind toe long and rather strong; the claws moderate, compressed, and slightly curved.

The species are found on the mountains of India. Mr. Hodgson informs us that they dwell in moist woods where there is plenty of underwood; they are solitary, silent, live and breed on the ground, and feed on seeds, gravel, and insects.

1. T. *albiventris* Hodgs. Journ. As. Soc. Beng. 1837. p. 102. — Tesia rufiventris *Hodgs.*; Pnoepyga pusillus *Hodgs.*; Micrura squamata *Gould*, Icon. Av. pl.
2. T. *concolor* Hodgs. Proc. Z. S. 1845. p. .
3. T. *castaneo-coronata* (Burt.) Proc. Z. S. 1835. p. 152. — Tesia flaviventer *Hodgs.* Journ. As. Soc. Beng. 1837. p. 102.; Type of Oligura *Hodgs.* (1845).
4. T. *cyaniventer* Hodgs. Journ. As. Soc. Beng. 1837. p. 101. — Saxicola ? olivacea *McClell.*

Oligura *Rüpp.*†

Bill moderate and slender, with the culmen gradually curved and the sides compressed to the tip, which is entire; the gonys long and slightly ascending; the nostrils lateral, placed in a membranous groove, with the opening lunate and partly covered by the membrane. *Wings* long and pointed, with the third and fourth quills the longest. *Tail* very short and rounded. *Tarsi* longer than the middle toe, slender, and covered with broad scales. *Toes* short; the outer toe longer than the inner one, and slightly united at the base; the hind toe long, and broadly padded beneath; the claws long, strong, compressed, and much curved.

The type of this genus was discovered in Abyssinia by Dr. Rüppel.

O. *micrurus* Rüpp. Faun. Abyss. t. 41. f. 1. — Troglodytes brevicaudatus *Rüpp.* MSS.

* Mr. Hodgson established this genus in 1837 (*Journ. As. Soc. Beng.* 1837, p. 102.). In 1841 he altered the name to *Anura*, and in 1845 to *Pnoepyga*. It is synonymous with *Microura* of Mr. Gould (1837), and *Oligura* of Mr. Hodgson (1845).

† It was in 1845 that Dr. Rüppell established this division.

Rhamphocœnus *Vieill.**

Bill very long, straight, and slender, with the culmen nearly straight, and the sides compressed to the tip, which is slightly emarginated; the gonys long and slightly ascending; the nostrils lateral, and placed in a membranous groove, with the opening linear, and partly covered by the membrane. *Wings* short and rounded; with the fifth, sixth, and seventh quills equal and rounded. *Tail* moderate, graduated, and composed of narrow feathers. *Tarsi* much longer than the middle toe, very slender, and covered in front with slightly divided scales. *Toes* moderate and slender; the outer toe longer than the inner one, and slightly united at its base; the hind toe long and broadly padded beneath; the claws moderate, compressed, and curved.

It is in the warmer parts of South America that the species are found.

1. R. *melanurus* Vieill. Gal. des Ois. t. 128. — Troglodytes rectirostris *Swains.* Zool. Ill. pl. 140.; Tr. gladiator *Pr. Max.*
2. R. *rufiventris* (Pr. Bonap.) Proc. Z. S. 1837, p. 119.
3. R. *trinitatis* Less. Rev. Zool. 1839. p. 42.
4. R. *viridis* Less. Tr. d'Orn. p. 377.

Troglodytes *Vieill.*†

Bill of various lengths, more or less straight and slender, with the culmen slightly curved, and the sides compressed to the tip, which is entire; the gonys long and slightly ascending; the nostrils lateral and placed in a groove, with the opening linear, and partly closed by a scale-like membrane. *Wings* short and rounded; with the fourth, fifth, and sixth quills equal and longest. *Tail* more or less short and rounded. *Tarsi* as long as the middle toe, and covered in front with very broad scales. *Toes* more or less long and slender; with the inner toe shorter than the outer, the latter slightly united at its base; the hind toe long and slender; the claws moderate, compressed, and curved.

The species that constitute this genus are found in Europe, Asia, America, and the West Indies. They are generally seen in pairs, in constant motion, examining the low thickets or coarse herbage in open plains or on the outskirts and open places of woods and forests, and even in those in the neighbourhood of houses. Their flight is low and short, and they are continually concealing themselves amongst the foliage of the low branches, or in holes and crevices, for several minutes, and re-appearing in another quarter. Various kinds of insects, either in the perfect state or in that of the larva, form their principal subsistence, which they procure while examining the bushes or holes, and some species thereby render infinite service to gardens and cultivated places. Most of the species possess a sweet, lively, and powerful whistling song, which they utter with great animation, often repeating over and over again the same note. The nest is placed against the branch of a tree, a bank, the wall of a house, or any place that offers warmth and security for their

* Vieillot established this genus in 1819 (*Nouv. Dict. d'Hist. Nat.* xxix. p. 6.). *Acontistes* of the Prince of Canino is synonymous.
† It was in 1807 that Vieillot established this genus (*Ois. de l'Amer. Sept.* ii. p. 52.). *Anorthura* of Rennie and *Thryothorus* of Vieillot (1816) are synonymous.

young. It is composed of moss and other soft materials, put together usually in an oval form, leaving only a small entrance on one side near the top. The eggs are generally four in number.

1. T. *parvulus* Koch. — Motacilla troglodytes *Linn.* Pl. enl. 651. f. 2.; Troglodytes europæus *Cuv.*; T. regulus *Meyer*, Gould, B. of Eur. pl. 130.

2. T. *subhimalayanus* Hodgs. Catal. Mam. and Birds, 1846. App. p. 151.

3. T. *hyemalis* Vieill. — Sylvia troglodytes *Wils.* Amer. Orn. pl. 8. f. 6., Audub. B. of Amer. pl. 360. f. 1—3.

4. T. *ædon* Vieill. Ois. d'Amér. t. 107. — Sylvia domestica *Wils.* Amer. Orn. pl. 8. f. 3.

5. T. *furvus* (Gmel.) Licht. Brown, Ill. pl. 18.

6. T. *americanus* Audub. B. of Amer. pl. 179.

7. T. *Parkmannii* Audub. B. of Amer. pl. .

8. T. *brevirostris* Audub. B. of Amer. pl. 175.

9. T. *hortensis* Less. Instit. 1834. p. 316. — Troglodytes magellanicus *Gould*, Proc. Z. S. 1836. p. 88.

10. T. *leucogaster* Gould, Proc. Z. S. 1836. p. 89.

11. T. *platensis* (Lath.) Less. Pl. enl. 730. f. 2. — Troglodytes hyemalis et T. fulvus *D'Orb. & Lafr.*

12. T. *chilensis* Less. Voy. de la Coqu. Zool. i. p. 662. — Troglodytes guereza *Cuv.*

13. T. *æquinoctialis* Swains. B. of Braz. pl. 13.

14. T. *spilurus* Vigors, Zool. Beechey's Voy. Birds, pl. 4. f. 1.

15. T. ——— ? Voy. au Pole Sud, Ois. t. 19. f. 6.

16. T. *tessellatus* D'Orb. & Lafr. Syn. Av. p. 25.

17. T. *pallidus* D'Orb. & Lafr. Syn. Av. p. 25.

18. T. *guarayanus* D'Orb. & Lafr. Syn. Av. p. 24.

19. T. *mexicanus* (Swains.) Zool. Illustr. n. s. pl. — Troglodytes albicollis *Cuv.*; Thryothorus guttulatus *Lafr.*; Trog. guttulatus *Hartl.*

20. T. *fumigatus* Temm. Man. d'Orn. iii. p. 161.

21. T. *murinus* Less. Rev. Zool. 1844. p. 434.

22. T. *audax* Tschudi, Fauna Peruana, p. 22.

23. E, *leucophrys* Tschudi, Fauna Peruana, p. 22.

24. T. *ludovicianus* (Lath.) Licht. Pl. enl. 730. f. 3. — Certhia caroliniana *Wils.* Amer. Orn. pl. 12. f. 5., Audub. B. of Amer. pl. 78., Thryothorus littoralis *Vieill.*; Type of Thryothorus *Vieill.* (1816).

25. T. *arundinaceus* Vieill. Ois. Amér. Septr. t. 108. — Certhia palustris *Wils.* B. of Amer. pl. 12. f. 4.

26. T. *obsoletus* (Say), Pr. Bonap. B. of Amer. pl. 1. f. 2., Audub. B. of Amer. pl. 360. f. 4.

27. T. *Bewickii* (Audub). B. of Amer. 18.

28. T. *ottothorax* (Bodd.) Pl. enl. 701. f. 2.—Turdus Alapi *Gmel.*

29. T. *rutilus* (Vieill.) Nouv. Dict. d'Hist. Nat. xxxiv. p. 56. — Troglodytes rutilans *Swains.* B. of Br. pl. 15.

30. T. *longirostris* (Vieill.) Nouv. Dict. d'Hist. Nat. xxxvi. p. 56. Gal. des Ois. t. 168., Griff. An. Kingd. pl. p. .

31. T. *striolatus* Spix, Av. Bras. t. 79. f. 2., Swains. B. of Br. pl. 16.

32. T. *melanos* (Vieill.) Nouv. Dict. d'Hist. Nat. xxxvi. 56.

33. T. *polyglottus* (Vieill.) Nouv. Dict. d'Hist. Nat. xxxvi. p. 59., Azara, 151.

34. T. *rosaceus* Less. Rev. Zool. 1840. p. 262.

35. T. *genibarbis* Swains. Two Cent. and a Quart. p. 323.

36. T. *striatulus* Lafr. Rev. Zool. 1845. p. 338.

37. T. *maculipectus* Lafr. Rev. Zool. 1845. p. 338.

38. T. *leucotis* Lafr. Rev. Zool. 1835. p. 388.

39. T. *rufalbus* Lafr. Rev. Zool. 1845. p. 337.

40. T. *fasciatoventris* Lafr. Rev. Zool. 1845. p. 337.

41. T. *coraya* (Gmel.) Pl. enl. 701. f. 1., Spix, Av. Bras. t. 73. f. 2.

42. T. *modulator* D'Orb. & Lafr. Voy. dans l'Amér. Mér. Ois. p. 230.

43. T. *murarius* Licht. Preis Verz. der Säugeth. &c. Herr. Deppe und Schiede.

44. ——— ? — Troglodytes mexicanus *Licht.* Preis Verz. der Säugeth. &c.

45. T. *latifasciatus* Licht. Preis. Verz. der Säugeth. &c.

46. T. *erythrophthalmus* Licht. Preis Verz, der Säugeth. &c.

47. T. *deflexus* Licht. Preis Verz. der Säugeth. &c.

CAMPYLORHYNCHUS *Spix.**

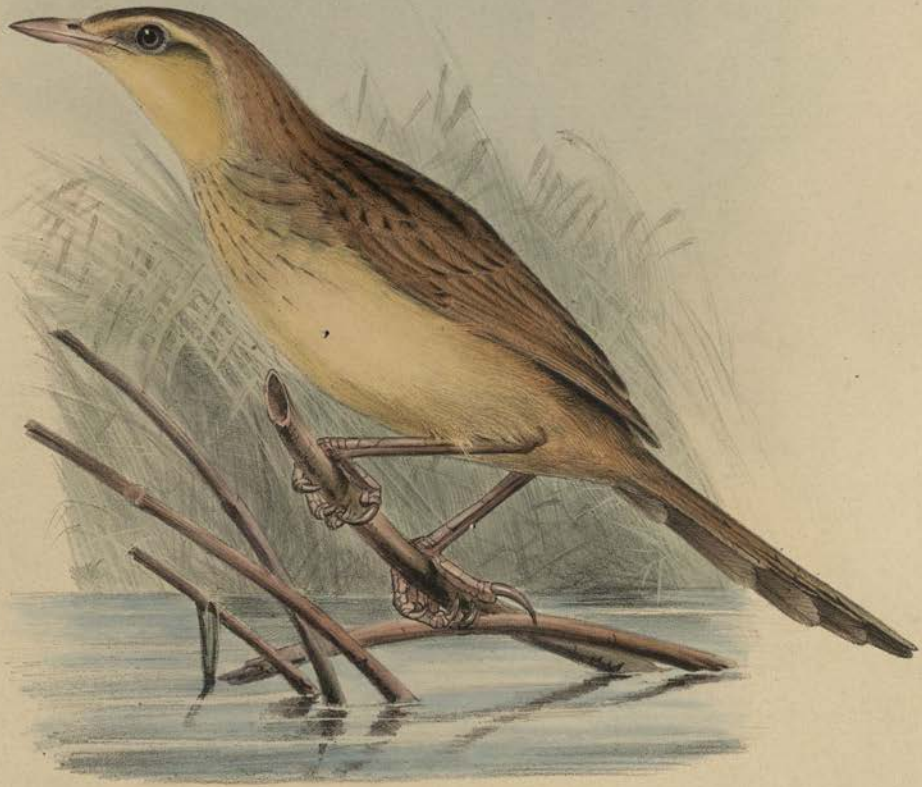
Bill rather long, with the culmen curved, and the sides compressed to the tip, which is entire; the gonys long and ascending; the nostrils lateral, placed in front of the membranous groove, with the opening oval and exposed. *Wings* moderate; with the fourth, fifth, and sixth quills nearly equal and longest. *Tail* moderate, broad, and rounded. *Tarsi* longer than the middle toe, and broadly scaled. *Toes* moderate; the outer longer than the inner toe, and slightly united at the base; the hind toe very long and armed with a large claw; the anterior claws moderate, compressed, and acute.

* Established by Spix in 1824 (*Avium Brasil.* ii. p. 77.). *Cichla* of Wagler (1827) is synonymous.

The species of this genus are peculiar to the warmer parts of South America. They live usually in societies, and the different species sometimes congregate together. Their food consists of insects, which they seek for on the ground in the dense forests. They run quickly, and are at times seen leaping about among the low branches; their flight rarely extends beyond a short distance, and then not far from the ground.

1. C. *variegatus* (Gmel.)—Turdus scolopaceus *Licht.* Spix, Av. Bras. t. 79. f. 1.; Opetiorhynchus turdinus *Pr. Max.* ?
2. C. *zonatus* (Less.) Cent. Zool. t. 70.
3. C. *zonatoides* (Lafr.) Rev. Zool. 1846. p. 92.
4. C. *brunneicapillus* (Lafr.) Mag. de Zool. 1833. Ois. t. 43.
5. C. *guttatus* (Gould), Proc. Z. S. 1836. p. 89.
6. C. *capistratus* (Less.) Rev. Zool. 1842. p. 174.—Campylorhynchus rufinucha *Lafr.* Rev. Zool. 1845. p. 339.
7. C. *brevirostris* (Lafr.) Rev. Zool. 1845. p. 339.
8. C. *megalopterus* (Lafr.) Rev. Zool. 1845. p. 339.
9. C. *cinnamomeus* (Less.) Rev. Zool. 1844. p. 433.
10. C. *pallescens* (Lafr.) Rev. Zool. 1846. p. 93.
11. C. *unicolor* (Lafr.) Rev. Zool. 1846. p. 93.
12. C. *unicoloroides* (Lafr.) Rev. Zool. 1846. p. 316.

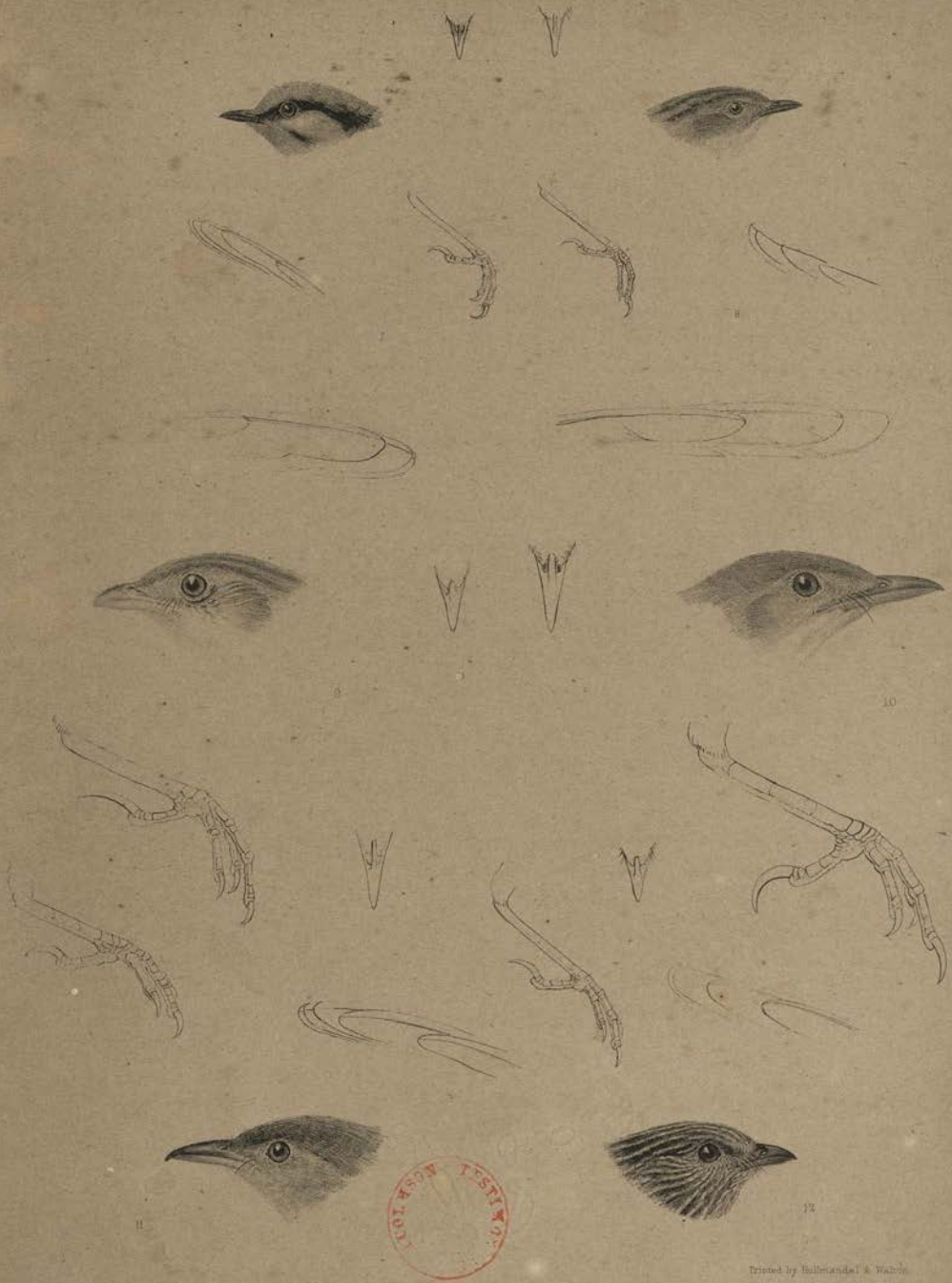
March, 1847.



Wolf Del. et lith. Printed by Hullmandel & Walton.

MYALURUS
citrinus, *G.R.Gray*

1 ORTHOTOMUS sepium 2 PRINIA familiaris 3 CINCLORAMPHUS cruralis 4 ATHICHIA clamosa
5 CALAMANTHUS pyrrhopygia 6 ORTHOTICA chimiana



ZOOLOGICAL SOCIETY

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7 MALURUS splendens. 8 STIPITURUS malacfurus. 9 CHÆTORNIS striata 10 MEGALURUS palustris.
11 SPHENURA tachyptera 12 AMYTIS textilis.

The third Tribe,

DENTIROSTRES, or Toothed-billed Birds,

embraces a numerous series of birds that have the tip of the upper mandible more or less emarginated and hooked; the Tarsi vary in length, but are mostly slender, and covered with broad scales; the Toes generally long, with the outer toe more or less united to the middle one at the base.

The first Family,

LUSCINIDÆ, or Warblers,

have the Bill subulate, more or less slender and straight, with the tip of the upper mandible curved and emarginated; the base sometimes broad, but the sides always compressed towards the tip; the Nostrils basal, and placed in a membranous groove, with the opening exposed: the Wings more or less long, sometimes rounded and sometimes pointed: the Tail of various lengths, truncated at the end, or rounded, and sometimes graduated: the Tarsi more or less long, always slender: the Toes varying in length, with the outer toe more or less united to the middle toe: the Claws curved and acute.

The first Subfamily,

MALURINÆ, or Soft-tailed Warblers.

have the Bill moderate, more or less slender and straight, with the tip of the upper mandible curved, and sometimes emarginated; the sides compressed; the nostrils basal, and placed in a membranous groove, with the opening exposed: the Wings short and rounded: the Tail more or less lengthened, and rounded: the Tarsi generally long and slender: the Toes more or less long, and always slender; with the outer toe united to the middle one at the base; the hind toe long, and armed with a strong claw.

Orthotomus *Horsf.**

Bill rather long, straight, and slightly depressed at the base, with the culmen slightly curved at the tip, which is entire; the lateral margins straight and inflexed; the nostrils basal, pierced in a broad membranous groove, with the opening longitudinal. *Wings* rather short, and rounded; with the first

* Established by Dr. Horsfield in 1820 (*Linn. Trans.* xiii. p. 165.).

quill spurious, and the fourth to the eighth equal and longest. *Tail* more or less long, much graduated, and composed of narrow feathers. *Tarsi* as long as the middle toe, and covered by a single scale in front. *Toes* moderate, with the outer toe longer than the inner, and united at its base; and the hind toe nearly as long as the middle toe, and armed with a long strong claw.

The species of this genus are inhabitants of the continent of India and its archipelago. They are familiar birds, frequenting in pairs or in small flocks the cultivated ground; and are generally seen actively hopping from branch to branch of low trees and shrubs, in search of small insects and their larvæ, that are found on the bark and foliage; but they may sometimes also be seen examining the ground for the same kind of food. While seeking their food or hopping about, they jerk up their tails over their backs, which gives them a singular appearance. Their song consists only of a single note often repeated. Their flight from tree to tree is performed in an undulating manner, and rather rapidly. The nest of one of the species is constructed of leaves of mango trees sewed together with cotton thread and fibres; the interior space being lined with cotton, on which the female deposits three or four eggs.

1. O. *sepium* Horsf. Linn. Trans. xiii. p. 166., Pl. col. 599. f. 1., Mag. de Zool. 1836. t. 51.
2. O. *edela* Temm. Pl. col. 599. f. 2. — Edela ruficeps *Less.?*
3. O. *longicaudus* (Gmel.) Cent. Zool. t. 71., Mag. de Zool. 1836. t. 52, 53. — Sylvia guzurata *Lath.*; Orthotomus Bennettii et O. lingoo *Sykes*; Motacilla sutoria *Gmel.*; Orth. sphenurus *Swains.*; Sylvia ruficapilla *Hutt.*
4. ? O. *longirostris* Swains. Two Cent. and a Quart. p. 343.
5. O. *atrogularis* Temm. Pl. col. (with t. 599.).
6. O. *cuculatus* Temm. Pl. col. 599. f. 3.
7. O. *sericeus* Temm. Pl. col. (with t. 599.).

Prinia *Horsf.**

Bill shorter than the head, straight, and rather broad at the base, with the sides compressed, and the culmen arched at the tip, which is slightly emarginated; the nostrils basal, placed in a short, broad, membranous groove, with the opening longitudinal. *Wings* rather short, and rounded; with the first quill abruptly, the second and third gradually, shorter than the fourth, fifth, and sixth, which are equal and longest. *Tail* lengthened and graduated. *Tarsi* lengthened, slender, and covered with scales. *Toes* long; with the outer toe shorter than the inner, and united at the base; the hind toe long, and armed with a long curved claw.

It is on the continent of India and its archipelago that the species are found. Their habits and manners are similar to those of the last genus. The nests of some species are placed in a low bush near the ground, and are composed of grass, wherein the female deposits four eggs.

1. P. *familiaris* Horsf. Linn. Trans. xiii. p. 165., Zool. Res. Birds pl. ., Swains. Zool. Illustr. n. s. pl. 97. — Orthotomus prinia *Temm.* Pl. col.
2. P. *flaviventris* (Deless.) Bl. Souv. ii. p. 30.
3. P. *olivaceus* (Raffl.) Bl. Linn. Trans. xiii. p. 313.
4. P. *socialis* Sykes, Proc. Z. S. 1832. p. 89.
5. P. *Stewartii* Blyth, Journ. A. S. B. 1847. p. 455.
6. P. *gracilis* Frankl. Proc. Z. S. 1831. p. 119.
7. P. *Hodgsoni* Blyth. — Prinia gracilis *Jerd.* Madr. Journ. Lit. & Sci.
8. P. *rufescens* Blyth, Journ. A. S. B. 1847. p. 456.
9. P. ———. — Prinia olivacea *Strickl.* Ann. Nat. Hist. xv. p. 126.
10. P. *icterica* Strickl. Ann. Nat. Hist. xv. p. 126.
11. P. *pileata* Blyth, Journ. A. S. B. 1842. p. 204.

* Established by Dr. Horsfield in 1820 (*Linn. Trans.* xiii. p. 165.).

Drymoica *Swains.**

Bill short, and more or less strong, with the culmen more or less curved, and the sides compressed to the tip, which is entire or slightly emarginated; the gonys long and ascending: the gape furnished with very short weak bristles; the nostrils basal, placed in a membranous groove, with the opening lunate, exposed, and partly closed by a scale. *Wings* short and rounded, with the fourth and fifth quills equal and longest. *Tail* more or less long, broad and rounded, and sometimes the tips of the feathers pointed. *Tarsi* rather longer than the middle toe, strong, and covered in front with broad scutellations. *Toes* lengthened and slender, with the lateral toes nearly equal, the outer united at its base, the hind toe long, and armed with a long claw.

Most of the species of this division are inhabitants of the continent of Africa; but others are found in South Europe, India, and Australia. They frequent shrubby places, open spaces abounding in long grass, and the reeds and herbage that grow on the margins of rivers and pools of water. It is on the ground that they mostly seek their food, which consists of insects. Their flight is weak, and generally performed only for a short distance; but their usual mode of concealment is by running among the herbage, which they are capable of doing with great dexterity, with the tail sometimes erect over the back. The song of these birds varies with the species; it is very loud and unpleasant. The nest is formed in low bushes or among reeds, and is composed of moss, fibres, and the cotton of plants; having in some instances an opening on the side for an entrance. The female deposits from six to eight eggs.

1. D. *maculosa* (Bodd.) — Sylvia macroura *Lath.* Pl. enl. 752. f. 2., Levaill. Ois. d'Afr. t. 129, 130.; Malurus capensis *Steph.*
2. D. *brachyptera* (Vieill.) Levaill. Ois. d'Afr. t. 122. — Bradypterus platyurus *Swains.*; Calamoherpe saltator *Boie*; Type of Bradypterus *Swains.* (1837).
3. D. *thoracica* (Shaw), Levaill. Ois. d'Afr. t. 123. — Apalis thoracica *Swains.* Zool. Ill. n. s. pl. 119., Nat. Misc. pl. 969.; Sylvia gutturalis *Boie.*
4. D. *textrix* (Vieill.) Smith, Levaill. Ois. d'Afr. t. 131., Smith, Ill. Zool. S. Afr. pl. 74. f. 1.—Type of Hemipteryx *Swains.* (1837).
5. D. *superciliosa* Swains. B. & W. Afr. pl. 11.
6. D. *subflava* (Gmel.) Levaill. Ois. d'Afr. t. 127. — Sylvia flavicans *Vieill.*
7. D. *diophrys* (Shaw), Levaill. Ois. d'Afr. t. 128., Nat. Misc. pl. 973.
8. D. *oxyura* (Shaw), Levaill. Ois. d'Afr. t. 133., Nat. Misc. pl. 957.
9. D. ? *coriphea* Levaill. Ois. d'Afr. t. 120.
10. D. *undata* (Lath.) Pl. enl. 582. f. 2.
11. D. *fulvicapilla* (Vieill.) Levaill. Ois. d'Afr. t. 124. f. 1, 2.
12. D. ? *minuta* (Shaw), Nat. Misc. pl. 997., Levaill. Ois. d'Afr. t. 134. — Parus fuscus *Vieill.* ?; Sylvia anthophila *Boie.*
13. D. *ocularia* Smith, Ill. Zool. S. Afr. pl. 74. f. 1.
14. D. *pectoralis* Smith, Ill. Zool. S. Afr. pl. 75. f. 2.
15. D. *substriata* Smith, Ill. Zool. S. Afr. pl. 72. f. 1.
16. D. *pallida* Smith, Ill. Zool. S. Afr. pl. 72. f. 2.
17. D. ———. — Dromoica ruficapilla *Smith*, Ill. Zool. S. Afr. pl. 73. f. 1.
18. D. *Levaillantii* Smith, Ill. Zool. S. Afr. pl. 73. f. 2.
19. D. *terrestris* Smith, Ill. Zool. S. Afr. pl. 74. f. 2.
20. D. *capensis* Smith, Ill. Zool. S. Afr. pl. 76. f. 1.
21. D. *subruficapilla* Smith, Ill. Zool. S. Afr. pl. 76. f. 2.
22. D. *affinis* Smith, Ill. Zool. S. Afr. pl. 77. f. 1.
23. D. *cherina* Smith, Ill. Zool. S. Afr. pl. 77. f. 2.
24. D. *aberrans* Smith, Ill. Zool. S. Afr. pl. 78.
25. D. *chiniana* Smith, Ill. Zool. S. Afr. pl. 79.
26. D. *natalensis* Smith, Ill. Zool. S. Afr. pl. 80.
27. D. *subcinnamomea* Smith, Ill. Zool. S. Afr. pl. 111. f. 1.
28. D. *fasciolata* Smith, Ill. Zool. S. Afr. pl. 111. f. 2.
29. D. *clamans* Rüpp. Zool. Atlas, t. 2. f. a., Pl. col. 466. f. 2.
30. D. *gracilis* Rüpp. Zool. Atlas, t. 2. f. b., Pl. col. 466. f. 1.
31. D. *pulchella* Rüpp. Zool. Atlas, t. 35. f. a.
32. D. *inquieta* Rüpp. Zool. Atlas, t. 36. f. b.
33. D. *ruficeps* Rüpp. Zool. Atlas, t. 36. f. a.
34. D. *rufifrons* Rüpp. Faun. Abyss. t. 41. f. 2.
35. D. *mystacea* Rüpp. Syst. Uebers. t. 10.
36. D. *robusta* Rüpp. Syst. Uebers. t. 13.
37. D. *lugubris* Rüpp. Syst. Uebers. t. 11.
38. D. *erythrogenys* Rüpp. Syst. Uebers. t. 12.
39. D. *polychroa* (Temm.) Pl. col. 466. f. 3.
40. D. *mentalis* Fras. Proc. Z. S. 1843. p. 16.
41. D. *Stangeri* Fras. Proc. Z. S. 1843. p. 16.
42. D. *lateralis* Fras. Proc. Z. S. 1843. p. 16.
43. D. *ruficapilla* Fras. Proc. Z. S. 1843. p. 16.
44. D. *rufa* Fras. Proc. Z. S. 1843. p. 17.
45. D. *rufogularis* Fras. Proc. Z. S. 1843. p. 17.

* Established by Mr. Swainson in 1827. It embraces *Bradypterus* (1837) and *Hemipteryx* (1837) of Mr. Swainson, and *Cisticola* of M. Lesson (1831), *Sphenœacus* of Mr. Strickland (1841), and probably *Horeites* of Mr. Hodgson (1844).

46. D. *uropygialis* Fras. Proc. Z. S. 1843. p. 17.

47. D. *superciliosa* Swains. B. of W. Afr. ii. p. 40. pl. 2.

48. D. *africana* (Gmel.) Levaill. Ois. d'Afr. t. 112. f. 2. — Muscicapa dubia *Forst.* Descr. Mam. p. 406., Icon. ined. 154. b.; Synallaxis cantor *Less.* Swains. Zool. Illustr. pl. 170.; Dasyornis africanus *Vig. & Horsf.*; Sphenura tibicen *Licht.*; Type of Sphenæacus *Strickl.* (1841).

49. D. *cisticola* (Temm.) Pl. col. 6. f. 3. — Cisticola schœnicola *Pr. Bonap.*; Prinia cursitans *Frankl.?*; Type of Cisticola *Lesson*, (1831).

50. D. *ruficeps* (Gould), Proc. Z. S. 1837. p. 150.

51. D. *magna* (Gould), B. of Austr. pl. . — Cisticola campestris *Gould*, Proc. Z. S. 1845. p. 20.

52. D. *exilis* (Lath.) Linn. Trans. xv. p. 136., Gould, B. of Austr. pl. .

53. D. *isura* (Gould), Proc. Z. S. 1847. p. ., B. of Austr. pl. .

54. D. *lineocapilla* (Gould), Proc. Z. S. 1847. p. ., B. of Austr. pl. .

55. D. *longicaudata* (Tick.?) Bl. — Prinia macroura *Frankl*; P. Franklinii *Blyth.*

56. D. *sylvatica* (Jerd.) Bl. Madr. Journ. Lit. & Sci. 1840. p. 4.

57. D. ? *neglecta* (Jerd.) Bl. Madr. Journ. Lit. & Sci. 1840. p.

58. D. *brevicaudata* Blyth, Journ. A. S. B. 1847. p. 459.

59. D. *Jerdoni* Blyth, Journ. A. S. B. 1842. p. 883. (Prinia n. s.) — Prinia inornata *Blyth.*

60. D. *inornata* (Sykes), Bl. Proc. Z. S. 1832. p. 89.

61. D. *criniger* (Hodgs.) Bl. Res. As. xix. p. 183. — Type of Suya *Hodgs.* (184).

62. D. *fusca* (Hodgs.) Bl. Proc. Z. S. 1845. p. 29.

63. D. *rufifrons* (Frankl.) Bl. Proc. Zool. 1832. p. . — Prinia brunneifrons *Hodgs.*; Drymoica Buchanani *Blyth.*

64. D. *lepida* Blyth, Journ. A. S. B. 1844. p. 376.

65. D. ? *schistilata* (Hodgs.) Proc. Zool. Soc. 1845. p. 30.

66. D. ? *pollicaria* (Hodgs.) Proc. Zool. Soc. 1845. p. 30. — Type of Horeites *Hodgs.* (1844).

67. D. ———. — Sylvia textrix *Audouin*, Descr. de l'Egypte, Ois. t. 5. f. 4. Zool p. 277.

Calamanthus *Gould.**

Bill moderate and straight, with the culmen slightly curved, and the sides compressed to the tip, which is scarcely emarginated; the gonys long and ascending; the gape furnished with very short weak bristles; the nostrils basal, placed in a short broad groove, with the opening lunate, exposed, and partly closed by a scale. *Wings* short and rounded; with the third quill nearly as long as the fourth to the seventh, which are equal and longest. *Tail* long, broad, and rounded. *Tarsi* longer than the middle toe, strong, and covered with very broad scales. *Toes* long; with the outer toe longer than the inner, and united at the base; the hind toe long, and armed with a strong claw.

The species that compose this genus are peculiar to the continent of Australia, where they frequent the open forests or plains abounding in low shrubs and tufts of coarse grass, among which they conceal themselves, on account of their great timidity and caution, running with their tails erect with great swiftness on the appearance of the slightest danger. The food of these birds consists of insects, which they seek for on the ground. Their song is usually poured forth while perched upon an exposed branch of a bush, and consists of a series of clear harmonious notes. The nest is placed on the ground in the midst of a bush, having in some instances an avenue leading to it; and is composed of dried grass and leaves, lined with feathers, sometimes in a globular form. The eggs are three or four in number.

1. C. *fuliginosus* (Vig. & Horsf.) Gould, Linn. Trans. xv. p. 230., B. of Austr. pl. . — Pratincola anthoïdes *Swains.*

2. C. *campestris* Gould, Proc. Z. S. 1840. p. 171., B. of Austr. pl. .

3. C. *pyrrhopygius* (Vig. & Horsf.) Linn. Trans. xv. p. 227., Gould, B. of Austr. pl. . — Type of Hylacola *Gould* (1842).

4. C. *cautus* (Gould), Proc. Z. S. 1842. p. 135., B. of Austr. pl.

5. C. *strigatus* (Lath.) Lamb. Icon. ined. 11. 9. — Anthus minimus *Vig. & Horsf.*; Type of Chthonicola *Gould* (1847).

* Established by Mr. Gould in 1837 (*Proc. Zool. Soc.* 1837, p. 150.). *Pratincola* of Mr. Swainson (1837) is coequal. It embraces *Hylacola* (1842) and *Chthonicola* (1847) of Mr. Gould.

Malurus *Vieill.**

Bill very short, slightly depressed and broad at the base, and straight, with the culmen curved, and the sides compressed to the tip, which is entire; the gape furnished with short strong bristles; the nostrils basal, and placed in a membranous groove, with the opening longitudinal and exposed. *Wings* very short; with the first quill half the length of the second, and the fourth to the sixth equal and longest. *Tail* more or less graduated, with the tips of the feathers broad and truncated. *Tarsi* as long as the middle toe, and slender. *Toes* moderate; with the inner toe shorter than the outer, which is united at the base; the hind toe rather long, and armed with a compressed curved claw.

These elegant birds are peculiar to the continent of Australia, where they frequent open spaces which are scattered with low brushwood or bushes, especially those that margin the rivers; but on the approach of winter they fearlessly seek the abode of man. They are usually observed on the ground in pairs or small flocks, with the tail erect over the back, passing rapidly by a series of bounding hops over the surface while searching for their food, which consists of various kinds of insects; these they sometimes seek for off and beneath the fallen trunks of trees. Their flight is weak, and only extended for a short distance at a time. The nest, which is formed in an oval shape with a small opening on the side, is composed of grass, lined with feathers and hairs; it is usually placed near the ground, in a low bush or tuft of grass. The female deposits four eggs.

1. M. *cyaneus* (Gmel.) Vieill. Lath. Gen. Syn. pl. 53., Gould, Syn. B. of Austr. pl. . f. 3. — Motacilla superba *Shaw*, Nat. Misc. pl. 10., Jard. and Selby, Ill. Orn. pl. 72. f. 3., Gould, B. of Austr. pl. .

2. M. *longicaudus* Gould, Proc. Zool. Soc. 1837. p. 148., B. of Austr. pl. .

3. M. *pulcherrimus* Gould, Proc. Zool. Soc. 1844. p. 106., B. of Austr. pl. .

4. M. *elegans* Gould, B. of Austr. pl. .

5. M. *splendens* (Quoy & Gaim.), Voy. de l'Astrol. Ois. t. 10. f. 1.—Malurus pectoralis *Gould*, Syn. B. of Austr. pl. . f. ., B. of Austr. pl. .

6. M. *melanotus* Gould, Proc. Zool. Soc. 1840. p. 163., B. of Austr. pl. .

7. M. *Lambertii* Vig. & Horsf. Linn. Trans. xv. p. 221., B. of Austr. pl. ., Jard. and Selby, Ill. Orn. pl. 72. f. 2., Lewin, B. of N. H. pl. 15.

8. M. *melanocephalus* (Lath.) Vig. & Horsf. Lamb. Icon. ined. iii. 38.—Sylvia dorsalis *Lewin*, B. N. H. pl. 16.; Malurus Brownii *Jard. & Selby*, Ill. Orn. pl. 72. f. 1.

9. M. *Brownii* Vig. & Horsf. Linn. Trans. xv. p. 223., Gould, B. of Austr. pl. . — Malurus cruentatus *Gould*.

10. M. *leucopterus* (Quoy & Gaim.), Voy. de l'Uranie, Ois. t. 23. f. 2. Gould, B. of Austr. pl. .

Stipiturus *Less.*†

Bill short and slender, with the culmen gradually curved, and the sides compressed to the tip, which is scarcely emarginated; the gonys long and straight; the gape furnished with long strong bristles; the nostrils basal, and placed in a membranous groove, with the opening suboval and exposed. *Wings* short and rounded; with the third quill nearly as long as the fourth, fifth, and sixth, which are equal and longest. *Tail* lengthened and much graduated, composed of six filiform shafts with decomposed webs. *Tarsi* longer than the middle toe, slender, and covered in front with an entire scale. *Toes* rather long and slender; with the inner toe rather longer than the outer, which is slightly united at the base; the hind toe long, and armed with a strong claw.

* Established by Vieillot in 1816.
† Established by M. Lesson in 1831 (*Tr. d'Ornith.* p. 414.).

The typical species of this genus is peculiar to Australia; frequenting the marshy districts clothed with tall rank grass, in the midst of which this bird conceals itself, and among which it is capable of running with great swiftness, carrying its tail erect over its back. Its flight is weak, and rarely employed; and its food consists of insects, which it seeks for among the herbage. The nest, which is concealed in a low bush or tuft of grass, is composed of grass, in the form of a ball, with a long opening on the side, and lined with feathers. The eggs are three in number.

S. *malachurus* (Lath.) Less. Lamb. Icon. ined. ii. 11., Levaill. Ois. d'Afr. t. 130. f. 2., Linn. Trans. iv. pl. 21. — Malurus palustris *Vieill.* Gould, B. of Austr. pl.; Malurus gularis *Griff.* An. Kingd. ii. pl. p. 39.

Atrichia *Gould.**

Bill nearly as long as the head, broad, and elevated at the base, with the culmen sloping, and the sides compressed to the tip, which is emarginated; the gonys long and slightly ascending; the gape not furnished with bristles; the nostrils basal, placed in a broad groove, and partly clothed with plumes, with the opening covered by a large scale. *Wings* short and rounded, with the first three quills graduated, and the fourth to the seventh nearly equal and longest. *Tail* lengthened, broad, and graduated. *Tarsi* moderate, strong, and covered with broad scales. *Toes* moderate; and the hind toe long, strong, and armed with a long curved claw.

The type of this genus is recorded by Mr. Gould as a resident among the dense thickets and tangled beds of dwarf trees in Western Australia. It emits a noisy note, which gives notice of its existence in such places.

A. *clamosa* Gould, Proc. Zool. Soc. 1844. p. 2., B. of Austr. pl.

Amytis *Less.*†

Bill moderate, and rather elevated at the base, with the culmen curved, and the sides compressed to the tip, which is hooked and emarginated; the gonys long and ascending; the gape furnished with three or four moderately long bristles; the nostrils basal, and placed in a broad groove, with the opening exposed and rounded. *Wings* short and rounded, with the fourth to the sixth quills nearly equal and longest. *Tail* very long, and graduated. *Tarsi* longer than the middle toe, robust, and broadly scutellated. *Toes* rather long, strong; with the outer longer than the inner, and united at its base; the hind toe long, strong, armed with a moderate compressed claw.

It is in various parts of Australia that the species of this genus are found. They frequent in small flocks the plains that are thinly covered with scrubs and clumps of a low shrub-like tree, amidst the branches of which they creep with great quickness. While on the ground their progress is performed by a series of rapid hops, carrying at the same time the head low and the tail erect over the back. The food of these birds consists chiefly of various kinds of insects.

1. A. *textilis* (Quoy & Gaim.) Less. Zool. de l'Uranie, Ois. t. 23. f. 1., Gould, B. of Austr. pl., Less. Tr. d'Orn. t. 67. f. 2.

2. A. *striata* (Gould), Proc. Z. S. 1839. p. 143., B. of Austr. pl.

3. A. *macroura* Gould, Proc. Z. S. 1847. p. ., B. of Austr. pl.

* Established by Mr. Gould in 1844 (*Proc. Zool. Soc.* 1844, p. 2.).
† Established by M. Lesson in 1831 (*Tr. d'Ornith.* p. 453.).

Sphenura *Licht.**

Bill moderate, with the culmen gradually sloping, and the sides compressed to the tip, which is emarginated and hooked; the gonys long and ascending; the gape furnished with two or four strong prominent bristles; the nostrils basal, and pierced in a broad membranous groove, partly clothed with plumes, with the opening covered by a membranous scale. *Wings* short and rounded, with the fifth to the seventh quills equal and longest. *Tail* lengthened and graduated. *Tarsi* rather longer than the middle toe, strong, and covered in front with broad scales. *Toes* long and strong; with the lateral toes equal, and the outer toe united at its base; the hind toe long, and armed with a long curved claw.

The species belonging to this genus are inhabitants of various parts of Australia. They frequent the overgrown reed beds and thickets, in the midst of which they swiftly run over the ground, having at the same time their tails erect over their backs; and it is in such places that they seek their food, which consists of insects. Their flight is heavy and very limited; and they are sometimes observed perched on the tops of a scrub, emitting at the same time a series of extremely varied loud notes. These birds form a rather large globular nest of grass, with an entrance on one side; and the female deposits two eggs therein.

1. S. *brachyptera* (Lath.) Licht. Lamb. Icon. ined. ii. 32. — Malurus pectoralis *Steph.*; Dasyornis australis *Vig. & Horsf.* Jard. and Selby, Ill. Orn. pl. 73., Gould, B. of Austr. pl.

2. S. *longirostris* (Gould), Proc. Z. S. 1840. p. 170., B. of Austr. pl.

3. S.? *brunnea* (Gould), Proc. Z. S. 1837. p. 150.

Chætornis.

Bill moderate and strong, with the culmen arched, and the sides much compressed to the tip, which is slightly emarginated; the gonys short and ascending; the gape furnished with four or five strong bristles; the nostrils basal, and placed in a membranous groove, which is partly clothed with plumes, with the opening oval and exposed. *Wings* rather short, and rounded; with the first quill half the length of the third; the second nearly as long as the three next, which are equal and longest. *Tail* lengthened, broad, and rounded. *Tarsi* rather shorter than the middle toe, strong, and covered with an almost entire scale in front. *Toes* lengthened and slender; the outer toe shorter than the inner, and slightly united at the base; the hind toe long, strong, and armed with a long, nearly straight, and acute claw.

The species that compose this genus are found in India.

1. C. *striata* (Jerd.) Madr. Journ. Lit. & Sci. 1841. p. 198. — Dasyornis locustelloïdes *Blyth.*

2. C. *colluriocеps* (Blyth), Journ. A. S. B. 1842. p. 603.

* Established by Professor Lichtenstein in 1823 (*Cat. Dupl. Berl. Mus.* p. 40.). *Dasyornis* of Vigors and Dr. Horsfield (1826) is synonymous.

CINCLORHAMPHUS *Gould.**

Bill shorter than the head, rather slender, and straight, with the culmen slightly curved, and the sides compressed to the tip, which is slightly emarginated; the gonys moderate and ascending; the gape furnished with a few very short bristles; the nostrils basal, and pierced in a membranous groove, with the opening oval and exposed. *Wings* moderate, with the first quill nearly as long as the second and third, which are equal and longest. *Tail* lengthened and more or less graduated, with the ends of the feathers rather acute. *Tarsi* longer than the middle toe, strong, and broadly scaled in front. *Toes* lengthened, with the lateral toe equal, and the outer slightly united at its base; the hind toe long, and armed with a strong curved claw.

These species are inhabitants of Australia, over which continent they are spread at certain seasons of the year, frequenting the open downs, grassy flats, and cultivated enclosures, and are usually observed on the ground, where they run with great dexterity, with their tails generally erect over their backs; if alarmed they will fly to the nearest dead branch of a tree, and run along it with great quickness, uttering at the same time a low song. Their flight is short; but at times they rise with a tremulous motion of the wings perpendicularly into the air, and then progress horizontally without any apparent movement of the wings for a short distance, uttering a loud but not unpleasant note. The female (which is much smaller than the male) forms her nest on the ground, of dried grasses, carelessly woven together. The eggs are four in number.

1. C. *cruralis* (Vig. & Horsf.) Gould, Linn. Trans. xv. p. 228., Gould, B. of Austr. pl.
2. C. *cantillans* Gould. — Cincloramphus cantatoris *Gould*, Proc. Z. S. 1842. p. 135., B. of Austr. pl.
3. C.? *sylvanus* (Hodgs.) Proc. Z. S. 1845. p. .—Type of Heterura *Hodgs.* (1845).

MEGALURUS *Horsf.*†

Bill moderate, rather slender, and straight, with the culmen curved, and the sides compressed to the tip, which is emarginated; the gonys moderate and slightly ascending; the gape furnished with short weak bristles; the nostrils basal, and pierced in a broad groove, with the opening oval and exposed. *Wings* moderate; with the first quill rather short; the second little shorter than the third, fourth, and fifth, which are equal and longest. *Tail* much elongated, and graduated. *Tarsi* longer than the middle toe, rather strong, and covered in front with broad scales. *Toes* lengthened, with the inner toe nearly as long as the outer, which is slightly united at its base; the claws compressed and acute.

The species that compose this genus are found in the Indian archipelago and Australia. They frequent the open grassy plains with scattered trees, and are usually noticed on the ground; but the male rises to a great height in the air, and then descends to the tops of the tall trees, commencing flying from one tree to another, and uttering at the same time his loud garrulous notes. The nest is formed on the ground, of dried grasses, lined with fine grass and hairs. The eggs are usually four in number.

* Established by Mr. Gould in 1837 (*Proc. Zool. Soc.* 1837, p. 150.). It probably embraces *Heterura* of Mr. Hodgson (1845).
† Established by Dr. Horsfield in 1820 (*Linn. Trans.* xiii. p. 158.).

1. M. *palustris* Horsf. Linn. Trans. xiii. p. 159. — Malurus marginalis *Reinw.* Pl. col. 65. f. 2.; Turdus Toklao *Buchan.*?

2. M. *isabellinus* Swains. Two Cent. and a Quart. pl.

3. M. *rufescens* (Vig. & Horsf.) Linn. Trans. xv. p. 230., B. of Austr. pl.

4. M. *galactotes* (Vig. & Horsf.) Linn. Trans. xv. p. 228., Pl. col. 65. f. 1., Gould, B. of Austr. pl.

5. M. *gramineus* (Gould), Proc. Z. S. 1845. p. 19., B. of Austr. pl.

6. M. *citrinus* G. R. Gray.

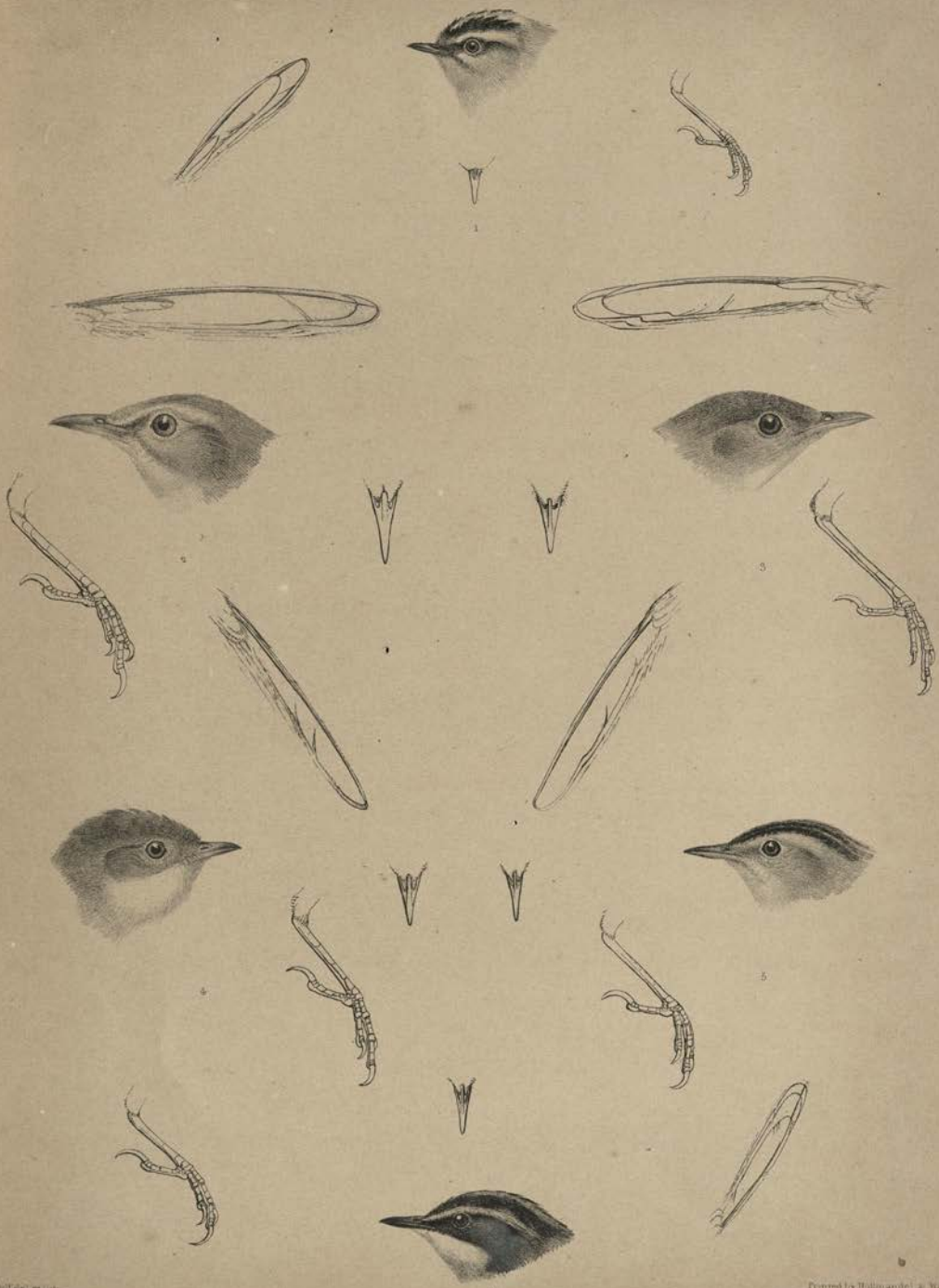
7. M.? *punctatus* (Quoy & Gaim.) Voy. de l'Astrol. Ois. t. 18. f. 3.

August, 1848.

Wolf del. et lith. Printed by Hullmandel & Walton.

CALAMODYTA
affinis Hodg.

REGULUS
castaneiceps Hodg.



Wolf del et lith. Printed by Hullmandel & Walton.

1. REGULUS ignicapellus. 2. AEDON galactodes 3. LUSCINIA philomela 4. SYLVIA curruca. 5. CALAMODYTA locustella.
6. CYANOTIS Azaræ.

The second Subfamily,

LUSCININÆ, or WARBLERS,

have the Bill more or less long, slender, and straight; with the culmen curved at the tip, which is slightly emarginated; the sides compressed, and the gonys long and ascending; the Nostrils basal, and placed in a membranous groove, with the opening usually exposed: the Wings moderate, and sometimes rounded: the Tail moderate, and rounded at the end: the Tarsi more or less lengthened, slender, and covered with broad scales, the divisions of which are sometimes obliterated: the Toes more or less long, slender; the outer toe generally longer than the inner, and united at its base: the Claws long, curved, and acute.

CALAMODYTA *Mey. & Wolf.* *

Bill rather small, and straight; with the culmen very slightly curved, and the sides compressed to the tip, which is scarcely emarginated; the lateral margins straight, and slightly inflexed; the gonys long and ascending; the gape sometimes furnished with very short weak bristles; the nostrils basal, placed in a membranous groove, with the opening oval and exposed. *Wings* rather short; with the first quill very short, the second rather shorter than the third and fourth, which are equal and longest. *Tail* moderate, broad, and rounded. *Tarsi* slender, longer than the middle toe, and covered in front with broad scales; sometimes the divisions between them are scarcely visible. *Toes* rather long, and slender; the outer toe longer than the inner one, and slightly united at the base, and the hind toe long and strong; the claws moderate, curved, and acute.

The species of this genus are peculiar to the Old World. They are found in marshes, on the borders of rivers among the reeds, and in low damp situations overgrown with brambles and underwood, among which they creep with surprising quickness, and where they generally remain concealed, owing to their great caution and shyness. Their song varies with the species, and is sometimes imitative of other birds. Insects, worms, and slugs form their chief food. The nest is placed by some in the bushes, while others are suspended between three or four of the closest adjoining reeds, stems, or rushes. It is composed of moss and grass, lined with feathers, &c. The eggs are four or five in number.

* Established by Meyer and Wolf in 1815; with which *Acrocephalus* of Naumann (1819), *Calamoherpe* of M. Boie (1822), *Salicaria* of Mr. Selby (1833), *Dumeticola* of Mr. Blyth, and *Agrobates* of Mr. Jerdon (1839) are synonymous. It contains also *Locustella*, *Calamodus*, and *Alsoeus*, of Dr. Kaup (1829); *Cettia* and *Pseudo-luscinia* of the Prince of Canino, the latter changed by His Highness to *Lusciniopsis* in 1842; *Lusciniola* of G. R. Gray (1841); *Iduna* of Count Keyserling and Dr. Blasius (1840); and *Tribura* of Mr. Hodgson (1845).

1. C. *fluviatilis* (Meyer & Wolf.) Taschenb. i. p. 229., Gould, B. of Eur. pl. 102. — Acrocephalus stagnatilis *Naum.* Descr. de l'Egypte, Ois. t. 13. f. 3,

2. C. *locustella* (Penn.) Brit. Zool. i. p. 518., Pl. enl. 581. f. 3. — Motacilla nævia *Bodd.* Gould, B. of Eur. pl. 103.; Locustella avicula *Ray;* L. Rayii *Gould;* Acrocephalus fluviatilis *Naum.*; Type of Locustella *Kaup* (1829).

3. C. *certhiola* (Pall.) Zoogr. i. p. 509., Werner, Iconog. Temm. Man. t.

4. C. *babœcula* (Vieill.) Levaill. Ois. d'Afr. t. 121. f. 1. — Calamoherpe loquax *Boie.*

5. C. *bæticula* (Vieill.) Levaill. Ois. d'Afr. t. 121. f. 2. — Sylvia isabella *Boie.*

6. C. *cantillans* (Temm. & Sch.) Fauna Japon. t. 20.

7. C. *cantans* (Temm. & Sch.) Fauna Japon. t. 19.

8. C. *cinnamomea* (Rüpp.) Faun. Abys. t. 42. f. 1.

9. C. *leucoptera* (Rüpp.) Syst. Uebers. t. 15.

10. C. *lanceolata* (Temm.) Man. d'Orn. iii. p. 614.

11. C. *caligata* (Licht.) Eversm. Reise, p. 128. — Motacilla salicaria *Pall.*; Type of Iduna *Keys. & Blas.* (1840).

12. C. *melanopogon* (Temm.) Pl. col. 245. f. 2., Gould, B. of Eur. pl. iii. f. 2. — Type of Lusciniola *G. R. Gray* (1841).

13. C. *phragmitis* (Bechst.) Naturg. Deutsch. iii. p. 635. — Motacilla schœnobænus *Linn.* Gould, B. of Eur. pl. 110.; Type of Calomodus *Kaup* (1829).

14. C. *aquatica* (Lath.) Ind. Orn. p. 510. — Sylvia schœnobanus *Scop.*; S. salicaria *Bechst.* Gould, B. of Eur. pl. 111. f. 1.; S. paludicola *Vieill.* Descr. de l'Egypte, t. 13. f. 4.

15. C. *cariceti* (Naum.) Vög. Deutsch. iii. p. 668. Gould, B. of Eur. pl.

16. C. *cetti* (Marm.) Mem. della Acad. de Torino xxv. p. 254., Pl. enl. 655. f. 2. — Cettia altisonans *Pr. Bonap.*; Sylvia platura et S. fulvescens *Vieill.* Pr. Bonap. Faun. Ital. t. 29. f. 3., Gould, B. of Eur. pl. 114.; Type of Cettia *Pr. Bonap.* (1838).

17. ? C. *sericea* (Natt.) Temm. Man. d'Orn. i. p. 197., Gould, B. of Eur. pl. 115.

18. C. *luscinioïdes* (Savi), Orn. Tasc. i. p. 270. — Pseudo-luscinia Savii *Pr. Bonap.* Gould, B. of Eur. pl. 104., Pr. Bonap. Fauna Italica, t. 30. f. 2.; Type of Pseudo-luscinia *Pr. Bonap.* (1838).

19. C. *arundinacea* (Linn.) Pl. enl. 513. — Sylvia turdoides *Meyer;* Acrocephalus lacustris *Naum.*; Agrobates brunnescens *Jerdon,* Gould, B. of Eur. pl. 106.; Salicaria turdina *Schl.*; Turdus junco *Pall.*

20. C. *olivetorum* (Strickl.) Gould, B. of Eur. pl. 109.

21. C. *elaica* (Linderm.) Isis, 1843, p. 342. — Ficedula ambigua *V. Homeyer.*

22. C. *strepera* (Vieill.) — Sylvia arundinacea *Lath.* Gould, B. of Eur. pl. 109., Pr. Bonap. Fauna Italica, t. 29. f. 2., Sylvia montana *Jerd.* ?

23. C. *affinis* (Hodgs.) Cat. Specim. Mam. and Birds, Brit. Mus. App. p. 151. — Dumeticola thoracica *Bl.*

24. C. *palustris* (Bechst.) Nat. Deutsch. iii. p. 639., Pr. Bonap. Fauna Ital. t. 30. f. 1., Gould, B. of Eur. pl. 109.

25. ? C. *pallida* (Ehrenb.) Keys. & Bl. Wirbelth. Europ. p. 54.

26. C. *languida* (Ehrenb.) Keys. & Bl. Wirbelth. Europ. p. 54.

27. C. *rufescens* (Keys. & Bl.) Wirbelth. Europ. p. 54.

28. C. *longirostris* (Gould), B. of Austr. pl.

29. C. *australis* (Gould), B. of Austr. pl. — Sylvia arundinacea *Lewin,* B. of N. H. pl. 18.

30. C. *montana* (Horsf.) Linn. Trans. xiii. p. 156.

31. C. ? *rama* (Sykes), Proc. Z. S. 1832. p. 89.

32. C. *luteoventris* (Horsf.) Proc. Zool. Soc. 1845. p. 30. — Type of Tribura *Hodgs.* (1845).

33. C. *agricola* (Jerd.) Madr. Journ. Lit. & Sci. 1844. p. 131.

Luscinia *Linn.**

Bill short and straight, with the culmen slightly curved, and the sides compressed towards the tip, which is emarginated; the gonys long and ascending; the gape not furnished with bristles; the nostrils basal, pierced in a short, broad, membranous groove, with the opening rounded and exposed. *Wings* moderate, with the first quill one third the length of the second, and the third the longest. *Tail* moderate, and rather rounded on the sides. *Tarsi* lengthened, strong, and covered in front by an entire scale. *Toes* very long, and slender; with the inner toe shorter than the outer, the latter united at its base; the hind toe long, and armed with a long curved claw.

These migratory birds inhabit the Old World; frequenting woods, coppices, close thickets, and hedges, at particular seasons, and from their shyness and caution remaining closely concealed among the foliage. Their food consists of insects and their larvæ, as well as small soft berries and fruits. At the commencement of summer the unrivalled song of the nightingale may be heard in all its richness and beauty, especially about midnight; but towards the end of summer the song is changed to a single, low, croaking note. The nest is formed upon the ground, and is composed of withered leaves, lined with fine dry grass. The female deposits four to six eggs.

* Established by Linnæus in 1738. *Curruca* of Bechstein (1802), *Daulias* of M. Boie (1831), *Philomela* of Mr. Selby (1833), and *Lusciola* of Count Keyserling and Dr. Blasius are coequal.

1. L. *major* Briss. — Sylvia philomela *Bechst.*; Motacilla aedon *Pall.* Gould, B. of Eur. pl. 117.

2. L. *philomela* Pr. Bonap. Pl. enl. 615. f. 2. — Motacilla luscinia *Linn.* Gould, B. of Eur. pl. 116.

Aedon *Boie.* *

Bill moderate and straight, with the culmen curved, and much compressed to the tip, which is entire; the gonys long, and slightly ascending; the gape not furnished with bristles; the nostrils basal, pierced in a short broad groove, with the opening exposed and oval. *Wings* moderate, with the first quill short, and the second nearly as long as the third and fourth, which are equal and longest. *Tail* lengthened and rounded. *Tarsi* long, and covered in front with broad scales. *Toes* short, with the inner toe shorter than the outer one; the latter is united at its base; claws small, compressed, and curved.

It is in the southern parts of Europe and on the continent of Africa that the species of this genus are found. They are migratory, and are always observed perched on the trees or bushes, searching for insects, which constitute their chief subsistence. They have a peculiar habit of jerking their wings and tail, the latter is also spread out to its fullest extent.

1. A. *galactodes* (Temm.) Boie, Pl. col. f. 1. — Turdus arundinaceus var. *Lath.*; T. rubiginosus *Meyer*, Gould, B. of Eur. pl. 112.
2. A. *familiaris* (Ménétr.) Cat. Reis. p. 32.
3. A. ? *leucophrys* (Vieill.) Levaill. Ois. d'Afr. t. 118. — Turdus pipiens *Steph.*
4. A. *pectoralis* (A. Smith), Rep. Exped. App. p. 46., Ill. Zool. S. Afr. pl. 49.
5. A. *pœna* (A. Smith), Rep. Exped. App. p. 56.; Ill. Zool. S. Afr. pl. 50.

Sylvia *Lath.* †

Bill more or less long, rather strong, and straight, with the culmen gradually curved, and the sides compressed to the tip, which is scarcely emarginated; the gonys long and ascending; the gape furnished with a few short weak bristles; the nostrils basal, and placed in a short broad groove, with the opening exposed and sublunate. *Wings* moderate, with the first quill very short, and the second shorter than the third, or third and fourth, which are the longest. *Tail* moderate, broad, and rounded on the sides. *Tarsi* rather shorter than, or as long as, the middle toe, and rather strong, and covered in front with broad scales. *Toes* moderate, with the inner toe shorter than the outer one; the latter united at its base; the hind toe long, and armed with a long strong claw; the claws of the fore toes curved, compressed, and acute.

The species that compose this genus are peculiar to the Old World, performing migrations at certain seasons of the year. They are usually seen in woods and thickets, in which they hide themselves, and through which they progress with great swiftness when alarmed. It is among the leaves and branches that they actively search for insects; they also feed

* Established by M. Boie in 1826. *Erythropygia* of Dr. Smith (1835) and *Agrobates* of Mr. Swainson (1837) are synonymous.

† Established by Latham in 1790; with which *Thamnodus* of Dr. Kaup (1829), *Staparola* and *Pyrophthalma* of the Prince of Canino (1841) are coequal. It embraces *Melizophilus* of Leach (1816); *Erythroleuca* of Dr. Kaup (1829); *Monachus* (1829); also *Epilais* of Dr. Kaup (1829), with which *Adornis* of G. R. Gray (1841) is synonymous; *Adophoneus* of Dr. Kaup (1829), with which *Nisoria* of the Prince of Canino (1838) is coequal; *Phyllopneuste* of Meyer and Wolf (1815), with which *Asilus* of Bechstein (1802) and *Hippolais* of M. Brehm (1828) are coequal; *Asilus* of Mœhring (1752), with which *Phylloscopus* of M. Boie (1826) and *Sibilatrix* of Dr. Kaup are synonymous. It probably embraces *Chloropeta* of Dr. A. Smith (1847), and *Neornis* of Mr. Hodgson (1844).

on the berries of the ivy and other soft berries. Some usually place themselves on the summit of a bush, and pour forth at intervals their clear and well defined notes; others utter their song on the wing, as they rise from the ground to a great elevation in the air and then return slowly to the spot whence they had started. They form their nests in low bushes or among nettles, of the stems of plants, lining them with a few hairs and fine fibres of roots. The eggs are generally four in number.

1. S. *melanocephala* (Gmel.) — Sylvia ruscicola *Vieill.*; Curruca momus *Ehrenb.* ? Gould, B. of Eur. pl. 129.

2. S. *sarda* Marm. Temm. Man. d'Orn. i. p. 211., Pl. col. 24. f. 2., Gould, B. of Eur. pl. 127.

3. S. *conspicillata* Marm. Pl. col. 6. f. 1., Gould, B. of Eur. pl. 126.

4. S. *subalpina* Bonn. Pl. col. — Sylvia leucopogon *Meyer*; S. passerina *Temm.*; S. mystacea *Ménétr.* Gould, B. of Eur. pl. 124.; Type of Erythroleuca *Kaup* (1829).

5. S. *undata* (Bodd.) Pl. enl. 655. f. 1. — Motacilla provincialis *Gmel.*; Sylvia dartfordiensis *Lath.*; S. ferruginea *Vieill.* Gould, B. of Eur. pl. 129.; Type of Melizophilus *Leach* (1816).

6. S. *Rüppellii* Temm. Pl. col. 245. f. 1. — Sylvia capistrata *Rüpp.* Zool. Atlas, t. 19. a. b.

7. S. *curruca* Lath. Pl. enl. 580. f. 3. ? — Motacilla rufa *Bodd.* ?; Sylvia leucopogon *Heckel*; Motacilla sylvia *Pall.*; Curruca garrula *Koch*; S. sylviella *Lath.* Descr. de l'Egypte, Ois. t. 5. f. 3., Gould, B. of Eur. pl.; Sylvia affinis *Blyth.*?

8. S. *atricapilla* (Briss.) Pl. enl. 580. f. 1, 2. — Sylvia rubricapilla *Sandb.*?; Type of Monachus *Kaup* (1829).

9. S. *cinerea* (Briss.) — Motacilla sylvia *Linn.* Pl. enl. 579. f. 3. 581. f. 1., Sylvia fruticeti *Vieill.*, Gould, B. of Eur. pl. 251. f. 1., Descr. de l'Egypte, Ois. t. 5. f. 2.; Type of Staparola *Pr. Bonap.*

10. S. *icterops* Ménétr. Cat. Rais. p. 34.

11. S. *hortensis* (Penn.) Pl. enl. 579. f. 2. — Motacilla Borin *Bodd.*; Sylvia ædonia *Vieill.* Gould, B. of Eur. pl. 121.; Type of Epilais *Kaup* (1829).

12. S. *orphea* Temm. Man. d'Orn. i. p. 198., Pl. enl. 579. f. 1., Gould, B. of Eur. pl. 119. — Sylvia grisea *Vieill.*; S. Jerdoni *Blyth.*?

13. S. *ochrogenion* Lindenm. Isis, 1843, p. 343.

14. S. *nisoria* Bechst. Naturg. Deutschl. iii. p. 547. — Nisoria undata *Pr. Bonap.*; Sylvia polyglotta *Vieill.* Pr. Bonap. Faun. Ital. t. 28. f. 1.; Type of Phyllopneuste *Meyer* (1815).

16. S. *ambigua* Schl. Rev. Crit. des Ois. d'Eur. App. p. 53.

17. S. *trochilus* (Linn.) Pl. enl. 651. f. 1. — Motacilla acredula *Linn.*; Ficedula fitis *Koch*; Sylvia flaviventris *Vieill.* Gould, B. of Eur. pl. 131. f. 1., Pr. Bonap. Faun. Ital. t. 27. f. 2., Descr. de l'Egypte, t. 13. f. 2.; Type of Asilus *Mœhr.* (1752).

18. S. *brevirostris* Strickl. Proc. Z. S. 1836. p. 98.

19. S. *sibilatrix* (Bechst.) Pl. col. 245. f. 3. — Sylvia sylvicola *Lath.* Gould, B. of Eur. pl. 131. f. 3., Pr. Bonap. Faun. Ital. t. 27. f. 1.; Type of Sibilatrix *Kaup* (1829).

20. S. *icterina* (Vieill.) N. Dict. d'Hist. Nat. xi. p. 194. Gould, B. of Eur. pl. 132., Pr. Bonap. Faun. Ital. t. 28. f. 2.

21. S. *rufa* (Lath.) Gould, B. of Eur. pl. 131. f. 2. — Sylvia abietina *Nils.*; S. hippolais *Penn.*; S. collybita *Vieill.* Pr. Bonap. Faun. Ital. t. 27. f. 3.

22. S. *Bonellii* (Vieill.) Ency. Méth. ii. p. 468. — Sylvia Nattereri *Temm.* Pl. col. 24. f. 3.; S. prasinopyga *Licht.* Pr. Bonap. Faun. Ital. t. 27. f. 4.

23. S. *fuscata* (Bl.) Journ. A. S. B. xi. p. 113.

24. S. *javanica* Horsf. Linn. Trans. xiii. p. 156. — Phylloneuste magnirostris et P. trochilus *Bl.*

25. S. *griseola* (Bl.) Journ. A. S. B. 1847. p. 443.

26. S. ? *flavolivacea* (Hodgs.) Cat. Specim. &c. Mam. and Birds, Brit. Mus. App. p. 152. — Neornis cacharensis *Hodgs.*?; Type of Neornis *Hodgs.* (1844).

27. S. *crassirostris* Rüpp. Zool. Atlas, t. 33. f. a.

28. S. *chocolatina* (Rüpp.) Syst. Uebers. t. 14.

29. S. *angusticauda* O'Des M. Rev. Zool. 1844. p. 24.

30. S. *fuscata* (Gmel.) Pl. enl. 584. f. 1.

31. S. *subflava* (Gmel.) Pl. enl. 584. f. 2, 3.

32. S. ? *mauritiana* (Gmel.) Pl. enl. 705. f. 1.

33. S. ? *borbonica* (Gmel.) Pl. enl. 705. f. 2.

34. S. ? *livida* (Gmel.) Pl. enl. 705. f. 3.

35. S. *coronata* (Temm. & Schl.) Faun. Jap. t. 18.

36. S. *brevicaudata* (Rüpp.) Zool. Atlas, t. 35. f. b.

37. S. *umbrinovirens* Rüpp. Faun. Abys. p. 112.

38. S. *obscura* A. Smith, Ill. Zool. S. Afr. pl. 112. f. 1.

39. S. *natalensis* (A. Smith), Ill. Zool. S. Afr. pl. 112. f. 2. — Type of Chloropeta *A. Smith* (1847).

40. S. *senegalensis* (Bodd.) — Sylvia rufigastra *Lath.* Pl. enl. 582. f. 1.

41. S. *flavescens* (Gmel.) Pl. enl. 582. f. 3.

42. S. *badiceps* Fras. Proc. Zool. Soc. 1842. p. 144.

Regulus *Cuv.**

Bill small, more or less slender, and rather broad at the base, with the sides gradually compressed towards the tip, which is curved, and scarcely emarginated; the lateral margins inflexed, and the gonys long and slightly ascending; the gape furnished with short weak bristles; the nostrils basal, with the opening lunate, and covered by a membranous scale. *Wings* moderate, with the first quill very short;

* Established by Cuvier between 1799 and 1800. *Reguloides* of Mr. Blyth (1847) and *Abrornis* and *Horornis* of Mr. Hodgson (1844) are synonymous.

the third rather shorter than the fourth and fifth, which are equal and longest. *Tail* moderate, and slightly emarginated in the middle. *Tarsi* longer than the middle toe, slender, and covered in front by an entire scale. *Toes* moderate, the outer toe longer than the inner, and united at its base; the claws rather long, slender, and curved.

The species of this genus are found in Europe, Asia, and America. They are migratory, and are usually observed on trees, especially the fir, and bushes, actively examining the branches and foliage for the minute insects and the larvæ that frequent them. It is not unusual to observe these birds hanging from the extremity of a branch, while searching for their favourite food. They possess in some seasons a loud song. The nest is suspended between two or three slender boughs, and it is composed of moss lined with feathers. The eggs are five to ten in number.

1. R. *cristatus* Ray. — Motacilla regulus *Linn.*; Regulus auricapillus *Selby*; R. flavicapillus *Naum.* Gould, B. of Eur. pl. 148. f. 1.; R. vulgaris *Steph.*

2. R. *ignicapillus* Brehm, Pl. enl. 651. f. 3. — Regulus pyrocephalus *Brehm*; R. mystaceus *Vieill.* Gould, B. of Eur. pl. 148. f. 2.

3. R. *proregulus* (Pall.) Zoogr. i. p. 499. — Regulus modestus *Gould*, B. of Eur. pl. 149., Blyth, Journ. A. S. B. 1843. p. 963.; Phyllopneuste reguloïdes *Hodgs.*; Type of Reguloïdes *Blyth* (1847).

4. R. *viridanus* (Bl.) Journ. A. S. B. 1843. p. 967. — Phyllopneuste rufa *Bl.*; Abrornis tenuiceps *Hodgs.* ?

5. R. *affinis* (Tick.) Journ. A. S. B. ii. p. . — Sylvia indica *Jerd.*

6. R. *lugubris* (Bl.) Journ. A. S. B. 1843. p. 968.

7. R. *nitidus* (Bl.) Journ. A. S. B. 1843. p. 965. — Hippolais Swainsoni *Hodgs.* ?

8. R. *tristis* (Bl.) Ann. Nat. Hist. 1843. p. 178. — Sylvia trochilus *Jerd.*

9. R. *trochiloïdes* (Sundev.)—Phyllopneuste reguloïdes *Bl.* Journ. A. S. B. 1842. p. 191.

10. R. *flaveolus* (Bl.) Abrornis xanthogaster *Hodgs.*

11. R. *erochroa* (Hodgs.) Cat. of Specim. &c. Mam. and Birds, Brit. Mus. App. p. 152. — Abrornis pulchra *Hodgs.*

12. R. *castaneoceps* (Hodgs.) Cat. Specim. &c. Mam. and Birds, Brit. Mus. App. p. 152.

13. R. *chloronotus* (Hodgs.) Cat. Specim. &c. Mam. and Birds, Brit. Mus. App. p. 152.

14. R. *schisticeps* (Bl.) Journ. A. S. B. xiv. p. 592. — Abrornis xanthoschistos *Hodgs.*

15. R. *flaviventris* (Hodgs.) Proc. Zool. Soc. 1845. p. 31. — Type of Horornis *Hodgs.* (1845).

16. R. *fuliginoventris* (Hodgs.) Proc. Zool. Soc. 1845. p. 31.

17. R. *fulviventris* (Hodgs.) Proc. Zool. Soc. 1845. p. 31.

18. R. *fortipes* (Hodgs.) Proc. Zool. Soc. 1845. p. 31.

19. R. *satrapa* Licht. — Sylvia regulus *Wils.* Amer. Orn. pl. 8. f. 2., Pr. Bonap. Amer. Orn. pl. 2. f. 4. ?, Audub. B. of Amer. pl. 183.; Regulus rubineus *Vieill.* Ois. d'Amér. Sept. t. 104, 105.; R. tricolor *Nutt.*

20. R. *Cuvieri* Audub. B. of Amer. pl. 55.

21. R. *calendula* (Linn.) Edw. Birds, pl. 254. f. 2., Wils. Amer. Orn. pl. 5. f. 3., Audub. B. of Amer. pl. 195.

Cyanotis *Swains.**

Bill rather long and straight, with the culmen straight, but curved at the tip, which is emarginated; the sides compressed; the gonys long and slightly ascending; the gape furnished with a few short weak bristles; the nostrils basal, pierced in a membranous groove, with the opening longitudinal and exposed. *Wings* moderate, with the third quill the longest, and the first two thirds the length of the second. *Tail* moderate, and rounded on the sides. *Tarsi* longer than the middle toe, slender, and covered in front with an entire scale. *Toes* lengthened and slender; the outer toe longer than the inner, and united at its base; the hind toe very long, and armed with a long curved claw.

The typical species of this division is found in the warmer parts of South America. It frequents the reeds on the borders of the lakes.

C. *Azaræ* (Licht.) — Sylvia omnicolor *Vieill.*; Regulus Byronensis *Gray*, Griff. An. Kingd. ii. pl. p. 42.; S. rubrigastra *Vieill.* Azara, No. 161.

* Established by Mr. Swainson in 1837. *Tachuris* of M. D'Orbigny and Baron Lafresnaye (1837) is coequal.

CULICIVORA *Swains.**

Bill rather lengthened, and rather depressed at the base, with the culmen curved at the tip, which is emarginated; the sides much compressed; the gonys very long and slightly ascending; the gape furnished with very short weak bristles; the nostrils basal, placed in a membranous groove, with the opening oblong and exposed. *Wings* very short, with the first quill very short, and the second shorter than the third; this is rather shorter than the fourth, which is the longest. *Tail* lengthened, slender, and graduated. *Tarsi* longer than the middle toe, slender, and with an entire scale. *Toes* moderate, with the inner toe shorter than the outer, and united at its base; the claws small and much curved.

The species of this genus are found both in North and South America. They are migratory birds frequenting the skirts of woods, along damp or swampy places and the borders of rivers and pools. Their food consists of minute insects; these they sometimes seize on the wing with great dexterity, or they may be seen hanging at the extremities of the branches of trees while searching the buds and foliage. When just alighted on a branch, the tail is usually erect and the wing drooping. The nest is formed of dried leaves and fibres of various plants, lined with horsehair and fibres of moss. The eggs are four or five in number.

1. C. *stenura* (Temm.) Swains. Pl. col. 167. f. 2.
2. C. *cærulea* (Gmel.) Swains. Vieill. Ois. d'Amér. Sept. t. 88., Audub. B. of Amer. pl. 84. — Motacilla cana *Gmel.*
3. C. *leucogastra* (Pr. Max.) Beitr. iii. p. 710., Pl. enl. 704. f. 1. — Culicivora atricapilla *Swains. Zool.* Illustr. n. s. pl. 57.
4. C. *elegans* Less. Zool. Voy. de Thetis, ii. p. 323.
5. C. *dumicola* (Vieill.) Hartl. — Sylvia cærulea var., Azara, No. 158.; S. bivittata *Licht.*
6. C. *budytoïdes* D'Orb. & Lafr. Syn. Av. p. 56.

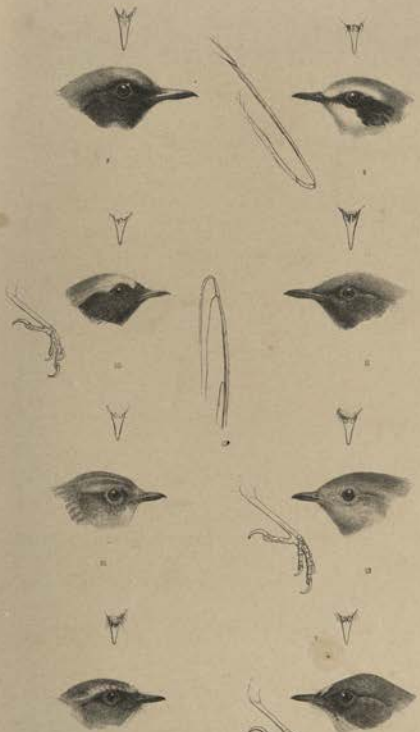
* Established by Mr. Swainson in 1827. *Hapalura* of M. Cabanis (1847) is coequal.

August, 1848.

C. Hullmandel's Patent Lithount.

GRANDALA
cœlicolor Hodg.

1. CORSYCHUS sanitaria. 2. DRYMODES brunneopygia. 3. GRANDALA cœlestina. 4. ORIGMA rubricata. 5. SIALIA Wilsoni. 6. THAMNORIA plymatura. 7. NEMURA rufilatus.



8. [illegible] rubrica. 9. SAXICOLA [illegible]. 10. RUTICILLA phœnicurus. 11. PRADYBATES phœnicurus. 12. FESTINOLA rubricata. 13. ERYTHRACUS rubecula. 14. CYANECULA suecica. 15. PETROICA phœnicea.

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The third Subfamily,

ERYTHACINÆ, or ROBINS,

have the Bill moderate, more or less slender, and rather depressed at the base, with the culmen slightly curved, and the sides gradually compressed to the tip, which is entire; the lateral margins straight, and sometimes inflexed, the gape more or less furnished with bristles; the Wings generally short and rounded, though sometimes long and pointed; the Tail usually short and broad, sometimes even or rounded at the end; the Tarsi lengthened, slender, and covered with an entire scale; the Toes moderate, the lateral ones unequal, and the claws moderate, curved, and acute.

COPSYCHUS *Wagl.**

Bill moderate, much compressed on the sides, with the culmen curved to the tip, which is emarginated, the lateral margins nearly straight and inflexed; the gape broad, and furnished with short bristles; the gonys moderate, and slightly advancing upwards; the nostrils basal, lateral, sunk in a slight groove, with a longitudinal or rounded opening. *Wings* moderate, with the first four quills graduated, and the fifth the longest. *Tail* more or less lengthened and graduated, or slightly rounded. *Tarsi* longer than the middle toe, and covered in front with a lengthened scale. *Toes* long, slender, the lateral ones nearly equal, and the hind toe long and rather strong; the claws long, compressed, curved, and acute.

These birds are found in India and Africa. They are generally seen solitary, in jungles, gardens, and avenues, frequenting the thickest trees and bushes, on which they perch until attracted to the ground by an insect, when they descend to the ground, and hop a few steps, jerking their tails, especially when they succeed in securing a grasshopper or other soft insect. Then they fly again to the same perch, elevating and depressing their tails on reseating themselves, and uttering a series of pleasing notes, more especially towards evening. Some species are held in great estimation for the beauty of their song. If alarmed, they fly before the intruder from tree to tree, at a low elevation.

1. C. *saularis* (Linn.) Edwards's Birds, pl. 181. — Turdus mindanensis *Gmel.* Pl. enl. 627. f. 1.; T. œmanus *Horsf.*; Lanius musicus *Raffl.*; L. shalaris *Vieill.*; Gryllivora magnirostra, G. intermedia, et G. brevirostris *Swains.*

2. C. *macrourus* (Gmel.) Wagl. Lath. Syn. iii. pl. 39., Le Vaill. Ois. d'Afr. t. 114., Kittl. Kupf. Vög. t. 11. f. 1. — Turdus tricolor *Vieill.*; Gryllivora longicauda *Swains.*; Type of Kittacincla *Gould* (1836).

3. C. *suratensis* (Gmel.).

4. C. *? atricollis* (Vieill.) Le Vaill. Ois. d'Afr. t. 113.

5. C. *? melanicterus* (Vieill.) Le Vaill. Ois. d'Afr. t. 117. — Turdus Australasiæ *Shaw*, Nat. Misc. pl. 1013.

6. C. *roseus* (Swains.) Two Cent. and a Quart. p. 342.

7. C. *melanoleucus* (Less.) Rev. Zool. 1840. p. 354.

8. C. *luteolus* (Less.) Rev. Zool. 1840. p. 226.

9. C. *luzoniensis* Kittl. Kupf. Vög. t. 11. f. 2.

* Established by Wagler in 1827 (*Syst. Avium*). It is coequal with *Gryllivora* (1831) of Mr. Swainson, *Cercotrichas* (1831) of M. Boie, *Lalage* (1836) of Chev. Sundevall, *Kittacincla* (1836) of Mr. Gould, and *Dahila* (1836) of Mr. Hodgson; this latter name was changed by its author to *Polypeira* in 1841.

MYIOMELA *Hodgs.**

Bill moderate and strong, with the culmen curved, and the sides compressed and inflexed to the tip, which is emarginated; the lateral margins nearly straight; the gonys moderate and ascending; the nostrils basal, lateral, with the opening lunate, and covered by a membranous scale. *Wings* rather long and rounded, with the fourth and fifth quills equal and longest. *Tail* moderate, broad, and rounded. *Tarsi* the length of the middle toe, slender, and covered by an entire scale in front. *Toes* long and slender, with the outer toe longer than the inner; the hind toe very long; the claws long, compressed, curved, and acute.

The type of this genus lives in the mountainous forests of Nepal. Its food consists of various kinds of insects, seeds, and pulpy berries.

M. *leucura* Hodgs. Proc. Z. S. 1845. p.

SAXICOLA.†

Bill moderate, rather depressed and broad at the base, with the culmen slightly curved, and the sides gradually compressed to the tip, which is slightly emarginated; the lateral margins straight and inflexed; the nostrils basal, lateral, and placed in a membranous groove, with the opening rounded. *Wings* long, reaching to the middle of the tail, with the second quill nearly as long as the third and fourth, which are the longest. *Tail* moderate and nearly even. *Tarsi* longer than the middle toe, and covered in front with an entire scale. *Toes* moderate, with the outer toe longer than the inner; the hind toe long; the claws rather short, slightly curved, and acute.

These migratory birds are found in most parts of the globe. They prefer, owing to their shy and wild habits, the moors, downs, and dry sandy banks of the sea coast, or places almost bare of vegetation, frequenting bushes, low trees, and hedges. They are generally seen solitary or in pairs, upon a perch, from which they keep watch; and, when they espy an insect or worm on the ground, they dart upon it, and having secured it resume their former perch. Their flight is smooth and quick, but always near the surface of the ground. Their song is sweet and pleasing, and is often uttered on the wing, hovering over the nest, while the female is engaged in incubation. It is under a large stone, or in the crevices of old walls, and even in holes on the sea coast, such as rabbit burrows, that the female forms her nest, composed of moss and grass mixed with wool, and lined with hair or wool. The eggs are five to six in number.

1. S. *œnanthe* (Linn.) Pl. enl. 554. — Motacilla vitiflora *Pall.* Gould, B. of Eur. pl. 90.; Œnanthe cinerea *Vieill.*; Saxicola rostrata *Ehrenb.*

2. S. *saltatrix* Menetr. Cat. Rais. p. 30. — Saxicola squalida *Eversm.*; Motacilla stapazina *Pall.*

3. S. *stapazina* (Linn.) Edwards's Birds, pl. 31. — Saxicola aurita *Temm.* Gould, B. of Eur. pl. 92.; Œnanthe albicollis *Vieill.* Temm. Pl. col. 257. f. 1.; S. xanthomelæna *Ehrenb.*

4. S. *leucomela* (Pall.) — Motacilla longirostris et M. Pleschanka *S. G. Gmel.* Gould, B. of Eur. pl. 89., Temm. Pl. col. 257. f. 3.; Muscicapa melanoleuca *S. G. Gmel.*

* Originally established in 1845, by Mr. Hodgson, under the name of *Muscisylvia* (*Proc. Zool. Soc.* 1845); which word, having been previously employed, is changed to the above.

† Established by Bechstein in 1802. It is equal with *Vitiflora* of Leach (1816), and *Œnanthe* of Vieillot (1816). It embraces *Campicola* Swains. (1827).

5. S. *leucura* (Gmel.) Lath. Gen. Syn. iii. pl. 38. — Saxicola cachinnans *Temm.* Gould, B. of Eur. pl. 88., Descr. de l'Egypte, t. 5. f. 1.

6. S. *leucuroïdes* Guet. Rev. Zool. 1843. p. 162.

7. S. *monacha* Rüpp. Pl. col. 359. f. 1.

8. S. *deserti* Rüpp. Pl. col. 359. f. 2.

9. S. *melanura* Temm. Pl. col. 257. f. 2.

10. S. *isabellina* Rüpp. Zool. Atlas, t. 34. f. 2.

11. S. *pallida* Rüpp. Zool. Atlas, t. 34. f. 1. — Saxicola isabellina *Temm.* Pl. col. 472. f. 1.

12. S. *crassirostris* Rüpp. Zool. Atlas, t. 33. f. 1.

13. S. *lugens* (Licht.) Rüpp. — Saxicola morio *Ehrenb.*

14. S. *sordida* Rüpp. Faun. t. 26. f. 2.

15. S. *semirufa* Rüpp. Faun. t. 25.

16. S. *rufocinerea* Rüpp. Faun. t. 27.

17. S. *lugubris* Rüpp. Faun. t. 28. f. 1.

18. S. *albifasciata* Rüpp. Syst. Uebers. &c. t. 16.

19. S. *nigra* (Vieill) N. Dict. d'Hist. Nat. xxi. p. 431., Le Vaill. Ois. d'Afr. t. 189.

20. S. *formicivora* (Vieill.) N. Dict. d'Hist. Nat. xxi. p. 421., Le Vaill. Ois. d'Afr. t. 186, 187. — Saxicola leucoptera *Swains.*

21. S. *infuscata* A. Smith, Ill. Zool. S. Afr. Birds, pl. 28.

22. S. *monticola* (Vieill.) Le Vaill. Ois. d'Afr. t. 184. f. 1. 185. — Vittiflora rupicola *Boie;* Gryllivora? capensis *Swains.*

23. S. *bifasciata* Temm. Pl. col. 472. f. 2.

24. S. *hottentotta* (Gmel.).

25. S. *pileata* (Gmel.) Le Vaill. Ois. d'Afr. t. 181, 182. — Sylvia imitatrix *Vieill.*; Type of Campicola *Swains.* (1827).

26. S. *cinerea* (Vieill.) Le Vaill. Ois. d'Afr. t. 184. f. 1.

27. S. *sperata* (Lath.).

28. S. *explorator* (Vieill.) Le Vaill. Ois. d'Afr. t. 183. f. 1, 2.

29. S. *caprata* (Linn.) Cuv. Pl. enl. 235. — Saxicola fruticola *Horsf.*; S. bicolor et S. erythropygia *Sykes.*

30. S. *violacea* (Bodd.) Pl. enl. 185. f. 2. — Motacilla philippensis *Gmel.* Kittl. Vög. t. 12. f. 2.

31. ? S. *pyrrhonotus* Mull. & Schl. Verd. Nat. Gesch. Nederl. p. 209.

32. S. *œnanthoïdes* Vigors, Zool. Beechey's Voyage, p. 19.

33. S. *cursoria* Vieill. Ency. Meth. p. 493., Le Vaill. Ois. d'Afr. t. 190., Desc. de l'Egypte, Ois. t. 5. f. 1. ? — Saxicola leucomelana *Burch.* Trav. Afr. i. p. 335. ? Vitiflora tachydroma *Boie.*

Pratincola *Koch.**

Bill short, with the gape broad, and furnished with short bristles; the culmen slightly curved, and the sides compressed to the tip, which is rather emarginated; the gonys long, and ascending; the nostrils basal, lateral, in a small membranous groove, with the opening rounded, and partly hidden by the frontal plumes. *Wings* long and rounded, with the fourth and fifth quills equal and longest. *Tail* short, broad, and slightly rounded on the sides. *Tarsi* slightly longer than the middle toe, slender, and covered by a single scale in front. *Toes* moderate, slender, and the outer toe rather longer than the inner; the hind toe long, and rather strong; the claws moderate, curved, and acute.

These birds are found only in the old continent, they prefer the open ground or commons, especially those covered with furze, and they are usually seen in pairs, or singly, perched on the tops of the furze bushes, or sometimes hovering over them on the wing, while uttering a quick but agreeable song. Their food consists of worms and insects, which they search the ground for, but they occasionally take a short flight in pursuit of insects on the wing, after capturing which they return often to the same branch from whence they started. The nest is carefully concealed amongst grass, or in a low bush; and is composed of dried grass, with some moss intermixed, and lined with grass. The female lays six eggs.

1. P. *rubetra* (Linn.) Pl. enl. 678. f. 2., Gould, B. of Eur. 93.

2. P. *rubicola* (Linn.) Pl. enl. 678. f. 1., Gould, B. of Eur. pl. 94. — Saxicola Hemprichii *Ehrenb.*; Sax. rubicola var. Caffra *Licht.* Le Vaill. Ois. d'Afr. t. 180.

3. P. *fervida* (Gmel.) Pl. enl. 583. f. 1.

4. P. *leucorhoa* (Gmel.) Pl. enl. 583. f. 2.

* It was in 1816 that Koch established this genus. It is equal with *Fruticicola* (1839) of Mr. Macgillivray, and *Rubetra* (1840) of me.

Ruticilla *Brehm.**

Bill moderate, rather depressed, broad at the gape, furnished with short bristles, and gradually compressed on the sides; the culmen straight, but gradually bent downwards at the tip, which is emarginated; the lateral margins straight and inflexed; the gonys long and slightly advancing upwards to the tip; the nostrils basal, lateral, and sunk in a membranous groove, with the opening rather rounded. *Wings* lengthened, reaching two thirds the length of the tail, and rounded, with the fourth and fifth quills equal and longest. *Tail* long, broad, and emarginated. *Tarsi* much longer than the middle toe, and covered in front with a lengthened scale. *Toes* short and slender, with the lateral ones rather short and equal; the hind toe long and strong; the claws moderate, compressed, and acute.

These migratory birds are found in various parts of the Old World. They are active, restless, and solitary in their habits, frequenting wooded places, gardens, old walls, and buildings. They generally seek their food, which consists of insects and berries, on the ground; and while thus engaged, and especially after feeding, they occasionally spread their tail, and jerk it up and down. The nest is built in crevices of old walls, and in holes of decayed trees. It is formed of moss, lined internally with hair and feathers. The female usually lays from six to eight eggs.

1. R. *phœnicurus* (Linn.) Pl. enl. 351. f. 1, 2. — Phœnicura ruticilla *Swains.* Gould, B. of Eur. pl. 95.
2. R. *tithys* (Scop.) Edwards's Birds, pl. 29. — Motacilla erythacus *Linn*, Gould, B. of Eur. pl. 96.; M. gibraltariensis *Gmel.*
3. R. *aurorea* (Pall.) Zoogr. i. 477. — Motacilla erythrogastra *Güldenst.* Kittl. Kupf. Vög. t. 26. f. 1.
4. R. *atrata* (Gmel.) Jard. & Selby, Ill. of Orn. pl. 86. f. 3.
5. R. *leucocephala* (Vigors), Proc. Z. S. 1831. p. 35., Gould, Cent. of B. pl. 26. f. 2.
6. R. *cæruleocephala* (Vigors), Proc. Z. S. 1831. p. 35., Gould, Cent. of B. pl. 25. f. 2.
7. R. *fuliginosa* (Vigors), Proc. Z. S. 1831. p. 35. — Phœnicura plumbea *Gould.*
8. R. *Reevesii* (Gray), Zool. Misc. p. 1.
9. R. *albifrons* (Brandt.).
10. R. *frontalis* (Vigors), Proc. Z. S. 1831. p. 172., Gould, Cent. of B. pl. 26. f. 1.
11. R. *simplex* Less. Rev. Zool. 1840. p. 265.
12. R. *melanura* Less. Rev. Zool. 1842. p. 265.
13. R. *leucoptera* Blyth, Journ. As. Soc. Beng. 1843. p. 962.
14. R. *cyana* (Hodgs.) Journ. As. Soc. B. 1837. p. 102. — Phœnicura superciliaris *Jerd.*; Larvivora brunnea *Hodgs.*; Type of Larvivora *Hodgs.* (1837).
15. R. *cruralis* (Bl.) Journ. As. Soc. B. 1843. p. 933. — Larvivora homochroa *Hodgs. MS.*
16. R. ? ———. — Cinclidium frontale *Bl.* Journ. As. Soc. B. 1842. 181., 1843. 954.

Nemura *Hodgs.*†

Bill moderate, broad at the base, and furnished with short bristles; the sides gradually compressed; the culmen curved to the tip, which is emarginated; the lateral margins straight and inflexed, and the gonys long and advancing upwards; the gape furnished with short bristles; the nostrils basal, lateral, and sunk in a small groove, with the opening small and rounded. *Wings* rather long, rounded, with the fourth and fifth quills nearly equal and longest. *Tail* long and rounded, with the ends of the feathers mucronate. *Tarsi* slender, much longer than the middle toe, and covered in front with an

* This genus was originally established in 1826 by M. Boie, under the name of *Ficedula*. This word having been previously used, it becomes necessary to adopt *Ruticilla* of M. Brehm (1828). It is equal with *Phœnicura* (1831) of Mr. Swainson. It embraces *Larvivora* (1837) of Mr. Hodgson, and probably *Cinclidium* of Mr. Blyth (1842).

† Established by Mr. Hodgson in 1845 (*Proc. Z. S.* 1845). It embraces *Tarsiger* of the same author.

entire scale. *Toes* long and slender, the lateral ones unequal, the inner the shortest; the hind toe long and strong; the claws long, curved, compressed, and acute.

It is in the central and northern parts of Nepal that these birds are found. They are solitary, and are either seen on low brushwood or on the ground, in which places they seek for small pulpy berries and minute insects. The nest is composed of moss, and is usually placed under the cover of some projecting rock or stone.

1. N. *rufilatus* Hodgs. Proc. Z. S. 1845. p. — Nemura cyanura et N. flavolivacea *Hodgs.*

2. N. *chrysæa* (Hodgs.) Proc. Z. S. 1845. p.—Type of Tarsiger *Hodgs.* (1845).

Bradybates *Hodgs.**

Bill moderate and slender, with the culmen curved, and the sides compressed to the tip, which is slightly emarginated; the gape broad, and furnished with short bristles; the lateral margins nearly straight and inflexed; the nostrils basal, lateral, placed in a membranous groove, with the opening lunate and partly exposed. *Wings* short and rounded, with the fourth and fifth quills equal and longest. *Tail* long, broad, and rounded. *Tarsi* rather longer than the middle toe, and slender, and covered in front with an entire scale. *Toes* rather long and slender, with the outer toe rather longer than the inner; the hind toe long, and furnished with a long, much curved, and acute claw.

1. B. *phœnicuroïdes* Hodgs. MSS.

2. B. *pectoralis* (Gould), Icones Avium. pl.

Erythacus *Cuv.*†

Bill moderate, strong, broad at the base, with the culmen slightly sloping to near the tip, which is curved and slightly emarginated; the sides compressed; the lateral margins nearly straight and inflexed, and the gonys long and advancing upwards; the nostrils basal and lateral, and placed in a membranous groove, with the opening exposed and longitudinal. *Wings* reaching to the end of the tail coverts, and rounded, with the fourth and fifth quills equal and longest. *Tail* moderate, broad, and emarginated. *Tarsi* slender, longer than the middle toe, and covered in front with an entire scale. *Toes* moderate and slender, with the outer toe longer than the inner, and united at the base; the hind toe long and slender; the claws moderate, curved, and acute.

The single species of this genus is found in Europe, where during the summer months it resides in the thickest woods, but on the approach of winter leaves its solitary abode, and is generally observed near the habitations of man. It is solitary in its habits, never congregating in flocks, even when performing its partial migrations. It subsists on worms (which it beats to death and cleanses before eating), insects, and their larvæ. It possesses great boldness in attacking other small birds, if approaching the vicinity of its nest, or the place that it has selected for its own peculiar province during the winter. The nest is composed of moss, stalks of plants, and dead leaves, lined internally with hair, and is

* This division was proposed by Mr. Hodgson in 1844 (*List of Nepal Birds*), under the name of *Bradypterus*; but which, having been used, is changed to the above.

† Established by Cuvier between 1799 and 1800. It is equal with *Daudalus* (1826) of M. Boie, *Rubecula* (1828) of M. Brehm.

hid in a mossy bank, among the roots of trees, or in holes of the rocks that are overgrown with ivy or other kinds of plants.

1. E. *rubecula* (Linn.) Cuv. Pl. enl. 361. f. 1., Gould, B. of Eur. 98. — Rubecula familiaris *Blyth.*
2. E. *Komadori* (Temm.) Pl. col. 570.
3. E. *Akahige* (Temm.) Pl. col. 571.

Cyanecula *Brehm.**

Bill moderate, straight, and slender, with the culmen slightly curved, and the sides compressed to the tip, which is acute and slightly emarginated; the lateral margins straight; the gonys long, and slightly ascending; the nostrils basal and lateral, with the opening exposed, and rather rounded. *Wings* moderate, reaching to one third the length of the tail, and the third and fourth quills equal and longest. *Tail* moderate and rounded. *Tarsi* slender, much longer than the middle toe, and covered in front by an entire scale. *Toes* long, slender, with the outer one rather longer than the inner; the hind toe long; the claws moderate, curved, and acute.

The birds of this genus are peculiar to the Old World, where they reside on the borders of forests. Their food consists of worms, insects, and their larvæ. The nest is formed in holes of decayed trees. The eggs are usually six in number.

1. C. *suecica* (Linn.) Pl. enl. 361. f. 2., Gould, B. of Eur. pl. 97. — Motacilla cærulecula *Pall.* Kittl. Kupf. Vög. t. 17. f. 1.
2. ? C. *fastuosa* (Less.) Rev. Zool. 1840. p. 266.
3. C. *Calliope* (Linn.)— Turdus Camschatkensis *Gmel.*; Calliope Lathami *Gould,* B. of Eur. pl. 114., Kittl. Kupf. Vög. t. 17. f. 2.

Petroica *Swains.*†

Bill short, rather depressed, broad at the base, with the culmen slightly sloping to near the tip, which is curved and slightly emarginated; the sides gradually compressed; the lateral margins nearly straight, and the gonys long and straight; the gape furnished with prominent bristles; the nostrils basal, lateral, and placed in a membranous groove, with the opening rounded or longitudinal, and partly concealed by the projecting plumes. *Wings* reaching to half the length of the tail, with the first quill very short, the second shorter than the third, which is rather shorter than the fourth and fifth, these are equal and longest. *Tail* moderate and emarginated, or rounded on the sides. *Tarsi* slender, as long as, or longer than, the middle toe, and covered in front with a long scale. *Toes* moderate, the outer longer than the inner, and united at its base; the hind toe long, rather strong; the claws short, curved, and acute.

These birds are found in most parts of Australia and in New Zealand. They seem to prefer the low bushes and woods skirting the open plains, or such flats as are studded here and there with large trees, among the lower branches of which, as well as on the ground beneath them, they may be observed darting about for insects of various kinds, in the

* Established by M. Brehm in 1828. It is equal with *Pandicilla* (1833) of Mr. Blyth, and with *Calliope* (1836) of Mr. Gould.
† Established by Mr. Swainson in 1832. It embraces *Erythrodryas* (1842) of Mr. Gould, and *Miro* (1831) of M. Lesson.

most bold and active manner. They possess a peculiar and plaintive song, resembling that of the robin; and, like this latter bird, they sometimes frequent the abodes of man during the winter. The nest is composed of dry grasses, strips of bark, mosses, and lichen, all bound firmly together with cobwebs and vegetable fibres, and lined interiorly with feathers, wool, or hair. It is usually placed in a hollow of a decayed tree, or a cavity in the bark, and sometimes in a fork of the branches a few feet from the ground. The eggs are three or four in number.

1. P. *multicolor* (Gmel.) Swains. Lath. Gen. Syn. vi. pl. 100., Swains. Zool. Ill. n. s. pl. 36., Lewin, B. of N. Holl. pl. 17. — Muscicapa erythrogastra *Lath.* Gould, B. of Austr. pl.; Petroica Boobang *Less.*?

2. P. *phœnicea* Gould, Proc. Z. S. 1836. p. 105., Gould, Syn. of Austr. B. pl. f. (head), B. of Austr. pl.

3. P. *modesta* Gould, Proc. Z. S. 1837. p. 147.

4. P. *pulchella* Gould, Proc. Z. S. 1839. p. 142.

5. P. *Goodenovii* (Vig. & Horsf.) Jard. & Selby, Ill. Orn. pl. 8. f. 2., Gould, Syn. Austr. B. pl. f. (head), B. of Austr. pl.

6. P. *cucullata* (Lath.) Lamb. Icon. ined. iii. 14. — Petroica bicolor *Swains.* Zool. Ill. n. s. pl. 43., Gould, B. of Austr. pl.

7. P. *fusca* Gould, B. of Austr. pl.

8. P. *erythrogaster* (Lath.) Lamb. Icon. ined. iii. pl. 30. — Saxicola rhodinigastra *Drap.*; Muscicapa Lathami *Vigors*, Zool. Journ. i. pl. 13., Jard. & Selby, Ill. Orn. pl. 8.; Type of Erythrodryas *Gould* (1842).

9. P. *coccinogaster* (Lath.) Lamb. Icon. ined. iii. t. 31., Lath. Gen. Syn. Suppl. ii. pl. 134.

10. ? P. *rufiventris* (Vieill.) N. Dict. d'Hist. Nat. xxvii. p. 12.

11. ? P. *ruficollis* (Vieill.) N. Dict. d'Hist. Nat. xxvii. p. 13.

12. P. *rosea* Gould, Proc. Z. S. 1839. p. 141., B. of Austr. pl.

13. P. *macrocephala* (Gmel.) G. R. Gray. — Turdus minutus *Forst.* Desc. Anim. p. 83., Icon. ined. 149., Lath. Gen. Syn. pl. 55.; Pachycephala? australis *Steph.*; Miro Forsterorum *G. R. Gray.*

14. P. *Dieffenbachii* G. R. Gray, Voy. Ereb. & Terr. Zool. Birds, pl. 6. f. 1.

15. P. *toitoi* (Garn.) G. R. Gray, Voy. de la Coqu. Zool. i. 590., Ois. t. 15. f. 3.

16. P. *albifrons* (Gmel.) G. R. Gray, Voy. Ereb. & Terr. Birds, pl. 6. f. 2. — Turdus ochrotarsus *Forst.* Desc. Anim. p. 82., Icon. ined. 148.

17. ? P. *australis* (Sparrm.) G. R. Gray, Mus. Carls. t. 69. — Muscicapa longipes *Garn.* Voy. de la Coqu. Ois. t. 19. f. 1.; Myiothera novæ zealandiæ *Less.*; Type of Miro *Less.* (1831).

Drymodes *Gould.**

Bill moderate, strong, with the culmen curved to the tip, which is slightly emarginated; the sides gradually compressed; the lateral margins slightly curved, and the gonys long and ascending; the nostrils basal and lateral, placed in a membranous groove, with the opening longitudinal. *Wings* rather short and rounded, with the fifth and sixth quills equal and longest. *Tail* long, broad, and rounded. *Tarsi* much longer than the middle toe, and covered in front with an entire scale. *Toes* moderate, the outer toe rather longer than the inner, and united at the base; the hind toe moderate and slender; the claws moderate, curved, and acute.

The type of this genus is only found in South Australia. Mr. Gould informs us that it is a quiet and inactive species, resorting much to the ground, over which, and among the underwood and low stunted bushes, it passes with great ease; it appears rarely to take wing, but to depend for security upon its dexterity in hopping away under the dense underwood of the most scrubby parts; he has occasionally observed it to mount to the most elevated part of a low bush, and there pour forth a sharp monotonous whistling note. When on the ground, and sometimes when perched on a twig, it elevates its tail considerably.

D. *brunneopygus* Gould, Proc. Z. S. 1840. p. 170., B. of Austr. pl.

* Established by Mr. Gould in 1840 (*Proc. Zool. Soc.* 1840, p. 170.).

GRANDALA *Hodgs.**

Bill short, slender, with the culmen slightly curved, and the sides much compressed to the tip, which is slightly emarginated; the lateral margins straight and inflexed; the gape broad, and furnished with a few short hairs; the nostrils basal, exposed, and partly covered by a membrane. *Wings* lengthened, reaching two thirds the length of the tail, with the second and third quills nearly equal and longest. *Tail* long, broad, and strongly emarginated. *Tarsi* as long as the middle toe, with the frontal scales slightly divided. *Toes* long and slender, with the outer toe rather longer than the inner.

This bird inhabits the northern region of Nepal in underspots near snows: it is solitary, and Mr. Hodgson found nsects and gravel in the stomach.

G. *cælicolor* Hodgs. Journ. As. Soc. B. 1843. p. 447.

SIALIA *Swains.*†

Bill rather short, broad at the base, and the sides compressed towards the tip, which is curved and slightly emarginated; the lateral margins curved and inflexed; the gonys long and nearly straight; the nostrils basal, lateral, and placed in a membranous groove, with the opening exposed and longitudinal. *Wings* very long and pointed, with the first quill very short, and the second nearly as long as the third and fourth, which are equal and longest. *Tail* moderate, broad, and emarginated. *Tarsi* shorter than the middle toe, and covered in front with an entire scale. *Toes* long and strong, with the outer toe longer than the inner; the hind toe moderate and strong; the claws short, curved, and acute.

These birds are peculiar to North and Central America; they are migratory, appearing in the States on the approach of spring, when they are usually seen about the habitations of man, or perched on the neighbouring trees. During the summer, however, they seek the open pasture fields, and there perched on a stalk keep a sharp look out for passing insects, or such as may be crawling among the grass, which they secure, and quickly resume their perch. On the approach of winter, they occasionally feed on various kinds of berries and fruits. Their migrations are performed in large flocks, at a considerable height in the air. The song of the typical species is a soft, agreeable, and often repeated warble, uttered with open quivering wings; but this is changed to a single plaintive note on the approach of winter. The nest is placed in holes of trees; the female raises two, and sometimes three broods in a season; each consists of five to six eggs, the male taking the youngest under his particular care, while the female is again sitting.

1. S. *Wilsoni* Swains. — Motacilla sialis *Linn.* Wils. Amer. Orn. pl. 3. f. 5., Edwards's Birds, pl. 24., Audub. B. of Amer. pl. 113.
2. S. *mexicana* Swains.— S. azurea? *Swains.* Phil. Mag. 1827. p. 369., Audub. B. of Amer. pl. 318. f. 2, 3, — Sialia occidentalis *Towns.*?; S. cæruleocollis *Vigors*, Zool. Beechey's Voy. p. 18. pl. 3.
3. S. *arctica* Swains. Faun. Bor. Amer. p. 209. pl. 39., Audub. B. of Amer. pl. 318. f. 4, 5.

* Established by Mr. Hodgson in 1843 (*Journ. As. Soc. Beng.* 1843, p. 447.).
† It was in 1827 that Mr. Swainson established this genus (*Zool. Journ.* iii. p. 173.).

THAMNOBIA *Swains.**

Bill slender, rather curved, with the culmen curved from the base to the tip, which is acute and entire; the lateral margins curved and inflexed, and the gonys moderate and straight; the nostrils basal, lateral, and sunk in a membranous groove, with the opening small and rounded. *Wings* short and rounded, with the fourth and fifth quills the longest. *Tail* long, broad, and even. *Tarsi* slender, much longer than the middle toe, and covered anteriorly with an entire scale. *Toes* short, the outer rather longer than the inner, and united slightly at the base; the claws short, compressed, and slightly curved.

It is in the southern portions of Africa, and the continent of India, that the species of this genus are found. Some of the species are usually noticed in the bushes and woods, or on stony hills, but others are mostly observed about villages, on high and old buildings, solitary, or in pairs, perched on the roofs, bushes, and trees, or examining the verandas, houses, and even the ground, on which they exhibit great activity, frequently pursuing and capturing insects. While thus engaged, they have the habit of jerking their tails up and down over their backs. They possess a series of pleasing notes which they pour forth while perched on the top of a wall or low tree. The nest is made on the ground, under a thick bush; the female usually deposits four eggs.

1. T. *ptymatura* (Vieill.) Swains. Le Vaill. Ois. d'Afr. t. 188. f. 2. — Thamnobia leucoptera *Swains.*
2. T. *rufiventris* (Vieill.) Swains. Le Vaill. Ois. d'Afr. t. 188. f. 1.
3. T. *fulicata* (Linn.) Pl. enl. 185. f. 1. — Turdus (Saxicoloides) erythruvus *Less.*
4. T. *atrata* Swains. Two Cent. and a Quart. p. 292.
5. T. *frontalis* (Swains.) B. of W. Afr. p. 46. — Saxicola albifrons Rüpp. Syst. Uebers. &c. t. 17.
6. T. *? cinnamomeiventris* (Lafr.) Mag. de Zool. 1836. Ois. t. 55, 56.
7. T. *? albiscapulata* (Rüpp.) Faun. Abyss. t. 16. f. 1.
8. T. *melæna* (Rüpp.) Faun. Abyss. t. 28. f. 2.
9. ? T. *albospecularis* (Eyd. & Gerv.) Mag. de Zool. 1836. Ois. t. 64, 65.

ORIGMA *Gould.*†

Bill moderate and slender, with the culmen curved, rather carinated, and the sides compressed to the tip, which is emarginated; the gonys long, rather ascending and angulated; the nostrils basal, lateral, and covered by a membranous scale. *Wings* moderate and rounded, with the fourth, fifth, and sixth quills nearly equal and longest. *Tail* rather long, and rounded on the sides. *Tarsi* longer than the middle toe, slender, and covered in front with slightly divided scales. *Toes* rather short, the outer toe longer than the inner; the hind toe moderate; the upper surface of all strongly scutellated; the claws short, compressed, much curved, and acute.

The bird on which this genus is founded is peculiar to Western Australia, where it lives in the deep rocky gullies, examining the cavities and chasms, seeking various kinds of insects, which constitute its food. It is shy, wary, and possesses a sharp and shrill note.

O. *rubricata* (Lath.) G. R. Gray, Lewin's B. of N. H. pl. 16. — Muscicapa solitaria *Lewin.*

* Mr. Swainson established this genus in 1831 (*Faun. Bor. Amer.* p. 489.). It is equal with *Saxicoloides* of M. Lesson (1837).
† Established by Mr. Gould in 1837 (*Proc. Zool. Soc.* 1837, p. 148.).

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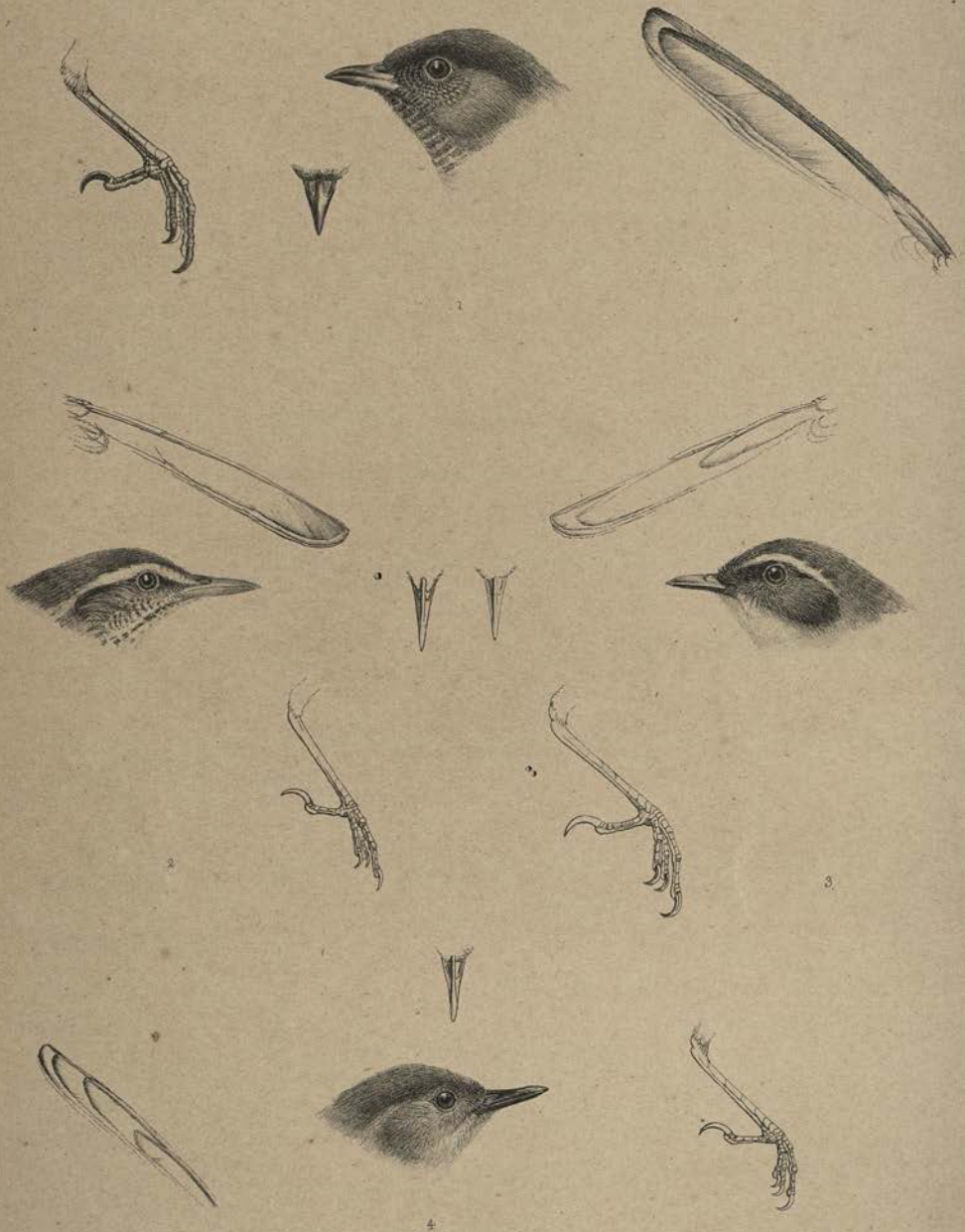
ACCENTOR
strophiatus Hodg.



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1. ACCENTOR nipalensis 2. ENICOCICHLA ludoviciana. 3. SERICORNIS citreogularis.
4. ACANTHIZA magnirostris.

The fourth Subfamily,

ACCENTORINÆ, or ACCENTORS,

have the Bill short, straight, and sometimes conical, with the culmen sloping, and the sides compressed to the tip, which is slightly emarginated; the Nostrils basal, and placed in a membranous groove, with the opening exposed: the Wings more or less long, pointed, and sometimes rounded: the Tail moderate, and generally rather rounded: the Tarsi moderate, and rather strong: the Toes rather long; the outer toe united at its base; the hind toe long, and armed with a strong claw.

ACCENTOR *Temm.**

Bill short and conical, with the base broad, the culmen sloping, and the sides compressed to the tip, which is emarginated; the lateral margins inflexed, and the gonys short and ascending; the nostrils basal, and placed in a broad membranous groove, with the opening linear and exposed. *Wings* long, with the first quill very short, and the third to the fifth quills equal and longest. *Tail* moderate, and slightly rounded. *Tarsi* strong, shorter than the middle toe, and broadly scutellated in front. *Toes* long; with the lateral toes equal, the outer united at its base; the hind toe long, and armed with a long compressed claw.

The species of this genus are found both in Europe and Asia; migrating from place to place, according to the season of the year. They frequent the ground beneath the low bushes, in the midst of which they hide, if alarmed. Some of the species seek the neighbourhood of villages and farms, if the winter should prove very severe; and their song commences very early in the season. It is composed of a series of notes, peculiar for their sweetness and feebleness of tone. Their food consists of seeds, insects of various kinds, and worms, which are sought for beneath the fallen leaves and stones. The nest is usually concealed in a thick bush, either near houses or in the woods. It is composed of moss and wool, lined with hair; whereon the female deposits four to five eggs.

1. A. *alpinus* (Gmel.) Bechst. — Sturnus collaris *Scop.* Gould, B. of Eur. pl. 99.
2. A. *himalayanus* Blyth, Journ. A. S. B. (1840.) p. .
3. ? A. *nipalensis* Hodgs. Journ. A. S. B. (1843.) p. 958. — Accentor maculatus et A. cacharensis *Hodgs.*
4. A. *variegatus* Blyth, Journ. A. S. B. 1843. p. 960.
5. A. *strophiatus* Hodgs. Journ. A. S. B. 1843. p. 959.
6. A. *montanellus* (Pall.) Temm. Gould, B. of Eur. pl. 101. — Accentor Temminckii *Brandt*? Type of Spermolegus *Kaup*, (1829).
7. A. *atrogularis* Brandt, Bull. Acad. Imp. St. Petersb.
8. A. *modularis* (Linn.) Cuv. Pl. enl. 615. f. 1., Gould, B. of Eur. pl. 100. — Type of Tharrhaleus *Kaup* (1829).
9. A. *altaicus* Brandt, Bull. Acad. Imp. St. Petersb.

* Established by Bechstein in 1802. *Prunella* of Vieillot (1816), *Spermolegus* and *Tharrhaleus* of Dr. Kaup (1829) are synonymous.

ENICOCICHLA *G. R. Gray.**

Bill moderate and subconical, with the culmen sloping, and the sides compressed to the tip, which is slightly emarginated; the gonys short and ascending; the nostrils basal, and placed in a small membranous groove, with the opening rounded and exposed. *Wings* rather long, with the first to the third quills equal and longest. *Tail* moderate and even. *Tarsi* as long as the middle toe, strong, and covered in front with a single scale. *Toes* moderate, and rather slender; with the outer toe united at its base; the hind toe rather short.

The species are inhabitants of North and South America; that of the former country migrates, during the cold season, to the more genial climate within the tropics. It frequents the woody districts, seeking among the fallen leaves for the small seeds and insects. It is in such places that the female forms her nest, which is usually sunk below the surface; and is composed of grass, so built that it is arched over, leaving a small hole only for an entrance on one side, within which are deposited four or five eggs.

1. E. *aurocapillus* (Wils.) G. R. Gray, Wils. Am. Orn. pl. 14. f. 2. — Turdus coronatus *Vieill.* Ois. de l'Amér. Sept. t. 64.

2. E. *sulfurascens* (D'Orb.) Voy. de l'Isle de Cuba, Ois. t. 6.

SERICORNIS *Gould.*†

Bill moderate and straight, with the culmen slightly sloping, and the sides compressed to the tip, which is emarginated; the gonys moderate and ascending; the nostrils basal, and placed in a membranous groove, with the opening lunate and exposed. *Wings* rather short, and rounded; with the first quill very short, and the fourth, fifth, and sixth nearly equal and longest. *Tail* moderate and nearly even. *Tarsi* long, rather slender, and covered by a single scale in front. *Toes* moderate; the lateral toes equal, and the outer toe united at its base; the hind toe rather long, and armed with a strong curved claw.

The species that compose this genus are peculiar to the continent of Australia. They frequent the brushes and the humid places, seeking on the ground beneath the rotten leaves, or fallen trunks of trees, and stones, for the insects that inhabit such places; sometimes they are seen hopping actively about from one small branch of a tree to another, occasionally pouring forth on a prominent twig a very feeble song, or, if alarmed, concealing themselves amidst the foliage of the bushes. The nest is suspended from a slender branch, and has the appearance of a mass of moss intermixed with other vegetable matter, in the middle of which, by a small entrance on the side, the female deposits two or three eggs.

1. S. *frontalis* (Vig. & Horsf.) Gould, Linn. Trans. xv. p. 226., Syn. B. of Austr. pl. ., B. of Austr. pl. — Sericornis parvulus *Gould.*
2. S. *humilis* Gould, Proc. Z. S. 1837. p. 133., B. of Austr. pl.
3. S. *citreogularis* Gould, Proc. Z. S. 1837. p. 133., B. of Austr. pl.
4. S. *osculans* Gould, Proc. Z. S. 1847. p. ., B. of Austr. pl.
5. S. *maculatus* Gould, Proc. Z. S. 1847. p. ., B. of Austr. pl.
6. S. *levigaster* Gould, Proc. Z. S. 1847. p. ., B. of Austr. pl.
7. S. *magnirostris* Gould, Proc. Z. S. 1837. p. 146., B. of Austr. pl.

* Originally established under the name of *Seiurus* by Mr. Swainson (1827), but which name was changed by me to the above in 1840.

† Mr. Gould established this genus in 1837.

ACANTHIZA *Vig. & Horsf.**

Bill short, slender, and straight, with the culmen curved, and the sides compressed to the tip, which is emarginated; the gonys short and ascending; the nostrils basal, and in a membranous groove, with the opening linear, and partly covered by setaceous bristles. *Wings* rather short and rounded; with the first quill short, and the third nearly as long as the fourth, which is the longest. *Tail* moderate and rather rounded. *Tarsi* longer than the middle toe, slender, and covered in front with an entire scale. *Toes* moderate, with the inner toe shorter than the outer, which is united at its base; the hind toe long, and armed with a strong curved claw.

The species of this genus are peculiar to New Holland, with the exception of two or three that are inhabitants of New Zealand. They are usually noticed hopping about on the lower branches of the bushes and on the ground, or on the fallen trunks of trees, while searching for the minute insects and seeds on which they chiefly feed. Most of the species possess a feeble song, which they sometimes utter from the tops of the low bushes. Their flight is weak, generally only exerted to move from bush to bush, or to fly a short distance when alarmed. The nest is generally dome-formed, with a small entrance left on one side; and is composed of a mixture of grasses, leaves, and wool; sometimes several are built together on the same branch of a low bush or tree.

1. A. *nana* Vig. & Horsf. Linn. Trans. xv. p. 226., Gould, B. of Austr. pl.
2. A. *pusilla* (Lath.) Vig. & Horsf. White's Journ. pl. in. p. 257., Gould, B. of Austr. pl.
3. A. *pyrrhopygia* Gould, Proc. Z. S. 1847. p. ., B. of Austr. pl.
4. A. *chrysorrhoa* (Quoy & Gaim.) Voy. de l'Astrol. Ois. t. 10. f. 2., Gould, B. of Austr. pl.
5. A. *lineata* Gould, Proc. Z. S. 1837. p. 146., B. of Austr. pl.
6. A. *diemenensis* Gould, Proc. Z. S. 1837. p. 146., B. of Austr. pl.
7. A. *uropygialis* Gould, Proc. Z. S. 1837. p. 146., B. of Austr. pl.
8. A. *inornata* Gould, Proc. Z. S. 1840. p. 141., B. of Austr. pl.
9. A. *reguloïdes* Vig. & Horsf. Linn. Trans. xv. p. 226., Gould, B. of Austr. pl.
10. A. *apicalis* Gould, B. of Austr. pl.
11. A. *Ewingii* Gould, B. of Austr. pl.
12. A. *Buchanani* Vig. &. Horsf. Linn. Trans. xv. p. 227.
13. A. *macularia* (Quoy & Gaim.) Voy. de l'Astrol. Ois. t. 10. f. 3.
14. A. ? *longirostris* (Quoy & Gaim.) Voy. de l'Astrol. Ois. t. 10. f. 4.
15. A. *albogularis* (Gould), Syn. B. of Austr. pl., B. of Austr. pl. — Type of Psilopus *Gould* (1837).
16. A. *brevirostris* (Gould), Proc. Z. S. 1837. p. 147.
17. A. *fusca* (Gould), Proc. Z. S. 147., B. of Austr. pl.
18. A. *olivacea* (Gould), Proc. Z. S. 1837. p. 147.
19. A. *culicivora* (Gould), Proc. Z. S. 1840. p. 174., B. of Austr. pl.
20. A. *magnirostris* (Gould), Proc. Z. S. 1842. p. 133.
21. A. *chloronotus* (Gould), Proc. Z. S. 1842. p. 133., B. of Austr. pl.
22. A. *lævigaster* (Gould), Proc. Z. S. 1842. p. 133.
23. A. *Igata* (Quoy & Gaim.) Voy. de l'Astrol. Ois. t. 11. f. 2.
24. A. *flaviventris* (G. R. Gray), Voy. of Ereb. and Terr. Birds, pl. 4. f. 1.
25. A. *albifrontata* (G. R. Gray), Voy. of Ereb. and Terr. Birds, pl. 4. pl. f. 2.
26. A. *brunnea* (Gould), Proc. Z. S. 1840. p. 173., B. of Austr. pl. — Type of Pyrrholæmus *Gould* (1840).

* Established by Vigors and Dr. Horsfield in 1825. It probably embraces *Psilopus* (1837) and *Pyrrholæmus* (1840) of Mr. Gould. The former was afterwards changed by him to *Gerygone*.

Hullmandel & Walton Lithographers.

PARUS
cæruleatus Malh

Hullmandel & Walton Lithographers.

1. SUTHORA nipalensis. 2. PARUS palustris. 3. PARISOMA subcoeruleum.
4. PARIGODES pendulinus. 5. SPHENOSTOMA cristatum. 6. CERTHIPARUS maculicaudus.

The fifth Subfamily,

PARINÆ, or TITMICE,

have the Bill short, strong, rather conical and straight, with the culmen straight, or slightly curved to the tip, which is entire; the nostrils lateral, basal, and generally concealed by the projecting frontal plumes; the Wings moderate and pointed, with the first three quills graduated; the Tail more or less long, rounded, and even; the Tarsi rather long, slender, and covered in front with scales; the Toes moderate, with the inner toe the shortest; the claws strong, and much curved.

PARUS *Linn.**

Bill short, strong, and conic, with the culmen more or less curved, and the sides compressed to the tip, which is entire and acute, the gonys moderate and ascending; the nostrils lateral and basal, with the opening small, rounded, and concealed by the projecting frontal plumes. *Wings* moderate; with the first quill very short; and the third rather shorter than the fourth and fifth, which are equal and longest. *Tail* more or less long, and rounded or even. *Tarsi* rather longer than the middle toe, and covered in front with transverse scales. *Toes* moderate; with the lateral toes nearly equal; the hind toe very long, strong, and armed with a long, curved, and acute claw.

These birds are found in Europe, Asia, Africa, and North America. They are usually observed in the woods and gardens, and are very active, flitting from bush to bush, running up and down branches with great celerity, and continually hanging in various attitudes from among the foliage while searching for their food, which consists of various kinds of insects and their larvæ. At times they feed on grain, seeds, and even carrion; they also attack young or sickly birds, which they kill by fracturing their skulls by repeated strokes of their pointed bill. The nests of some species are formed in holes of decayed trees or old walls, and are composed of moss; and lined with hairs and feathers. Others select the fork of a tree or the middle of a bush, wherein they place an oval-formed nest, made of different lichens and wool, intermixed and lined with feathers. Two orifices are left by the bird on the two opposite sides, which serve for ingress and egress, and through one of which the long tail projects whilst the bird is hatching the eggs, which are from six to ten in number.

* Linnæus established this genus in 1735. *Lophophanes*, *Cyanistes*, and *Poecila* of Dr. Kaup (1829); *Melanochlora* of M. Lesson (1839), with which *Crataionyx* of Mr. Eyton (1839) is synonymous; *Psaltria* of M. Temminck; *Orites* of Mœhring (1752), with which *Mecistura* of Leach (1816), *Acredula* of Koch (1816), and *Paroides* of M. Brehm (1828) are synonymous; and probably *Megistina* of Vieillot (1816), are coequal with the name employed.

1. P. *major* Linn. Pl. enl. 3. f. 1. — Parus fringillago *Pall.* Gould, B. of Eur. pl. 150., Ellis, Icon. ined. p. 93. low fig.

2. P. *monticola* Vigors, Proc. Z. S. 1831. p. 22., Gould, Cent. of B. pl. 29. f. 2.

3. P. *xanthogenys* Vigors, Proc. Z. S. 1831. p. 23., Gould, Cent. of B. pl. 29. f. 1.

4. P. *quadrivittatus* Lafr. Rev. Zool. 1840. p. 129.

5. P. *melanolophus* Vigors, Proc. Z. S. 1831. p. 22., Gould, Cent. of B. pl. 30. f. 2.

6. ? P. *dichrous* Hodgs. Journ. A. S. B. 1844. p. 943.

7. P. *cæruleus* Linn. Pl. enl. 3. f. 2., Gould, B. of Eur. pl. 154. — Type of Cyanistes *Kaup* (1829).

8. ? P. *teneriffæ* Less. Tr. d'Orn. p. 456.

9. ? P. *ultramarinus* Barth. Rev. Zool. 1841. p. 146.

10. P. *cæruleanus* Malh. Mém. de l'Acad. Roy. de Metz, 1842.

11. P. *cyaneus* Pall. N. C. Petr. xiv. 588. t. 23. f. 3. — Parus sæbyensis *Sparr.* Mus. Carls. t. 25.; P. knjaesck *Gmel.* Gal. des Ois. t. 68., Gould, B. of Eur. pl. 153.

12. P. *ater* Linn. Naum. Vögels, t. 24. f. 46. — Parus carbonarius *Pall.*, Gould, B. of Eur. pl. 155. f. 1., Ellis, Icon. ined. 93. upper fig.

13. P. *Ledouci* Malh. Mém. de l'Acad. Roy. de Metz, 1842.

14. P. *Bokharensis* Jaubert, Bull. Sci. d'Hist. Nat. ix. p. 77.

15. P. *nuchalis* Jerd. Madr. Journ. Sci. & Lit. 1844. p. 131.

16. P. *atriceps* Horsf. Linn. Trans. xiii. p. 160., Pl. col. 287. f. 2. — Parus cinereus *Vieill.* Levaill. Ois. d'Afr. t. 139. f. 2. (1).

17. P. *cinerascens* Vieill. N. Dict. d'Hist. Nat. xx. p. 316., Levaill. Ois. d'Lafr. t. 138.

18. P. *fuscus* Vieill. N. Dict. d'Hist. Nat. xx. p. 309., Levaill. Ois. d'Afr. t. 139. f. 1. (2).

19. P. *afer* Gmel. Jard. & Selby, Ill. Orn. pl. 117.

20. P. *nipalensis* Hodgs. Ind. Rev. 1838. p. 31. — Parus cæsius *Tick.*

21. P. *æmodius* Hodgs. Journ. A. S. B. 1844. p. 943.

22. P. *niger* Vieill. N. Dict. d'Hist. Nat. xx. p. 325., Levaill. Ois. d'Afr. t. 137. t. 1. — Parus luctuosus *Licht.*

23. ? P. *leucomelas* Rüpp. Fauna Abyssinica t. 37. f. 2.

24. P. *leucopterus* Swains. B. of W. Afr.

25. P. *leuconotus* Guer. Rev. Zool. 1843. p. 162. — Parus dorsalis *Rüpp.* Uebers. Syst. Vog. von Nord Ost Afr. t. 18.

26. P. *cristatus* Linn. Pl. enl. 502. f. 2., Gould, B. of Eur. pl. 156. — Type of Lophophanes *Kaup* (1829).

27. P. *palustris* Linn. Pl. enl. 3. f. 3., Gould, B. of Eur. pl. 155. f. 2. — Type of Poecila *Kaup* (1829).

28. P. *cinctus* Bodd. Pl. enl. 708. f. 3. — Parus sibiricus *Gmel.* Gould, B. of Eur. pl. 151. f. 2., Ellis, Icon. ined. 94.; P. japonicus et P. Lathami *Steph.* ?

29. ? P. *lugubris* Natt. Temm. Man. d'Orn. p. 293., Gould, B. of Eur. pl. 151. f. 1.

30. P. *borealis* Selys-Longch. Bull. Acad. Roy. Brux. x. p. 28.

31. P. *atricapillus* Linn. Briss. Orn. iii. t. 29. f. 1., Pl. enl. 502. f. 1., Wils. Amer. Orn. pl. 8. f. 4., Audub. B. of Amer. pl. 353. f. 3, 4. — P. hudsonicus *Mill.* Cim. Phys pl. 21. A., Audub. B. of Amer. pl. 194.; Parus palustris var. β. *Lath.* Pl. enl. 502. f. 1.

32. P. *frigoris* Selys-Longch. Bull. Acad. Sci. Brux. 1843. p. 29.

33. P. *bicolor* Linn. Catesby, Carol. i. pl. 57., Wils. Amer. Orn. pl. 8. f. 5., Audub. B. of Amer. pl. 39., Gould, B. of Amer. pl. 152.

34 P. *inornatus* Gamb. Proc. Acad. Nat. Sci. Phil. 1845. p. 265.

35. P. *carolinensis* Audub. B. of Amer. pl. 160.

36. P. *rufescens* Towns. Audub. B. of Amer. pl. 353. f. 1, 2.

37. P. *minimus* Towns. Audub. B. of Amer. pl. 353. f. 5, 6.

38. P. *septentrionalis* Harr. Ann. of Nat. Hist. 1846. p. 452.

39. P. *fasciatus* Gamb. Proc. Acad. Nat. Sci. Philad. 1845. p. 265.

40. P. *melanotis* Sandb. Rep. Brit. Assoc. vi. p. 99., Rev. Zool. 1844. p. 216.

41. P. *sultaneus* Hodgs. Ind. Rev. 1838 p. 31.

42. ? P. *sumatranus* (Less.) Rev. Zool. 1839. p. 42. — Parus flavocristatus *Lafr.* Mag. de Zool. 1837. Ois. t. 80.; Crataionyx atra et C. flava *Eyton*; Type of Melanochlora *Less.* (1839).

43. P. *elegans* Less. Tr. d'Orn. p. 456.

44. P. *erythrocephalus* Vigors, Proc. Z. S. 1831. p. 23., Gould, Cent. of B. pl. 30. f. 1.

45. P. *jouchistos* Hodgs. Journ. A. S. B. 1844. p. 943.

46. P. *seriophrys* Hodgs. Journ. — Sylviparus modestus *Burt.* ?

47. P. *exilis* (Temm.) Pl. col. 600. f. 4. — Type of Psaltria *Temm.* (1832).

48. P. *caudatus* Linn. Pl. enl. 502. f. 3. — Parus longicaudus *Briss.*; Mecistura vagans *Leach*, Gould, B. of Eur. pl. 157.; Type of Orites *Mœhr* (1752).

49. P. *alpinus* Gmel.

50. ? P. *ignotus* Brün. — Parus bicolor (*Lath.*) *Less.*; Type of Megistina *Vieill.* (1816).

Suthora *Hodgs.**

Bill very short and strong, with the culmen flattened, broad and curved to the tip, which is truncated, the sides compressed and the gonys long, broad, slightly rounded, and ascending; the nostrils basal, and lateral, with the opening rounded and entirely concealed by the frontal projecting plumes. *Wings* rather short; with the first, second, and third quills graduated; the fourth rather shorter than the fifth, sixth, and seventh, which are equal and longest. *Tail* lengthened and cuneated. *Tarsi* longer than

* Mr. Hodgson established this genus in 1838 (*Indian Review*). He has since changed this name to *Temnoris* (1841), and *Hemirhynchus* (1843).

the middle toe, slender, and covered by an entire scale in front. *Toes* moderate, with the lateral ones equal, and the outer slightly united at its base.

This type inhabits Nepal.

S. *nipalensis* Hodgs. Ind. Rev. 1838. p. 32., Journ. A. S. B. 1844. pl. p. 450. — Temnoris atrifrons et T. fulvifrons *Hodgs.*

Paroides *Koch.**

Bill moderate and slender, with the culmen straight or slightly curved to the tip, which is entire and acute, the sides compressed, and the gonys long and ascending; the nostrils basal and lateral, with the opening entirely hidden by the projecting frontal plumes. *Wings* rather short; with the first quill very short, and the second nearly as long as the third and fourth, which are equal and longest. *Tail* moderate and forked, or lengthened and graduated. *Tarsi* as long as the middle toe, and broadly scaled in front. *Toes* moderate, with the lateral ones nearly equal, the outer slightly united at its base; the hind toe long and strong; the claws long and strong, especially that of the hind toe.

These birds reside amongst the reeds that grow on the banks of rivers, lakes, and in marshy places in various parts of Europe and Africa. Their food consists of insects, and they feed occasionally on seeds of various plants and grasses. The nest is intertwined amongst a tuft of reeds, and is placed above the reach of the water.

1. P. *pendulinus* (Linn.) Pl. enl. 618. f. 3. — Parus narbonensis *Gmel.*, Pl. enl. 708. f. 1., Gould, B. of Eur. pl. 159.
2. P. *capensis* (Gmel.) Sonn. Voy. t. 115.
3. P. *Smithii* (Jard.) Edin. Journ. Nat. Sci. n. s. i. p. 212. pl. 5, Ill. Orn. pl. 113. f. 1.
4. P. *pensilis* (Licht.).
5. P. *biarmicus* (Linn.) Pl. enl. 618. f. 1, 2. — Parus barbatus *Briss.*; P. russicus *Gmel.* Gould, B. of Eur. pl. 158.; Type of Panurus *Koch* (1816).

Certhiparus *Lafr.*†

Bill moderate, with the culmen curved and the sides compressed to the tip, which is entire, and the gonys long and slightly ascending; the nostrils lateral, placed in a groove with the opening lunate, and partly concealed by the projecting frontal plumes. *Wings* moderate and rounded, with the fifth quill the longest. *Tail* long and rounded. *Tarsi* much longer than the middle toe, and broadly scutellated in front. *Toes* long, with the lateral ones equal; the hind toe long and strong, the claws moderate, slightly curved, and acute.

All the species that compose this genus inhabit the Islands of New Zealand. Their habits and manners have not been noticed, except that they feed on insects.

* Koch established this name in 1816 (*Syst. der Baier. Zool.*), with which *Ægithalus* of Vigors (1825) and *Pendulinus* of M. Brehm (1828) are synonymous. It embraces *Panurus* of Koch (1816), with which *Calamophilus* of Leach (1816) and *Mystacinus* of M. Boie (1822) are coequal.

† The Baron de Lafresnaye established this genus in 1842 (*Rev. Zool.* 1842).

1. C. *novæ seelandiæ* (Gmel.) Lafr. Voy. Ereb. & Terr. Birds, pl. 5. f. 1. — Parus urostigma *Forst.* Descr. Anim. p. 90., Icon. ined. 166.
2. C. *maculicaudus* G. R. Gray. — Parus zelandicus *Quoy & Gaim.* Voy. de l'Astrol. Ois. t. ii. f. 3.
3. C. *albicillus* (Less.) G. R. Gray, Voy. de la Coqu. Zool. i. p. 662. — Parus senilis *Dubus*, Bull. Acad. Sci. Brux. 1839. 297., Voy. Ereb. & Terr. Birds, pl. 5. f. 2.

Sphenostoma *Gould.**

Bill short, higher than broad, and conic, with the culmen curved, and the sides much compressed to the tip, which is entire, the gonys long and ascending; the nostrils lateral, and placed in a short, broad groove, with the opening round, and more or less exposed. *Wings* short and rounded; with the fourth, fifth, and sixth quills nearly equal and longest. *Tail* long and graduated. *Tarsi* as long as the middle toe, strong, and the front covered with broad transverse scales. *Toes* rather long and strong, with the lateral ones unequal, and the outer slightly united at its base; the claws moderate, slightly curved, and acute.

This genus is only found on the low shrubby trees and bushes of the hot plains of the interior parts of Australia. The habits and manners are at present unknown to naturalists.

1. S. *cristatum* Gould, Syn. of B. of Austr. pl., B. of Austr. pl.
2. S. *leucopsis* (Gould), Proc. Z. S. 1840. p. 175. — Type of Xerophila *Gould* (1840).

Parisoma *Swains.*†

Bill moderate, with the culmen curved, and the sides much compressed to the tip, which is emarginated, the gonys rather short, and curved upwards; the gape furnished with short bristles; the nostrils lateral, and placed in a broad groove, with the opening longitudinal, and partly closed by a membranous scale. *Wings* moderate, with the fifth and sixth quills the longest. *Tail* rather long, broad, and rounded. *Tarsi* longer than the middle toe, strong, and covered in front with broad transverse scales. *Toes* rather long, with the lateral toes equal, and the outer slightly united at the base; the hind toe long and strong; the claws strong, compressed, and acute.

It is in Africa, both in the southern and northern portions of that vast continent, that this bird lives, in societies of ten or more individuals, which are seen examining one after another all the branches of the trees, searching the cracks in the bark and under the leaves for insects, their larvæ, and eggs, which form their principal subsistence, and uttering a slight chirping while flying from tree to tree.

1. P. *subcæruleum* (Vieill.) Levaill. Ois. d'Afr. t. 126. — Parisoma rufiventer *Swains.*
2. P. *Galinieri* Guer. Rev. Zool. 1843. p. 62. — Parisoma frontale *Rüpp.* Uebers. Syst. t. 22.

* Mr. Gould established this genus in 1837 (*Proc. Zool. Soc.* 1837. p. 149.). It embraces *Xerophila* of Mr. Gould (1840).
† Mr. Swainson established this genus in 1831 (*Fauna Boreali-Americana*, p. 490.).

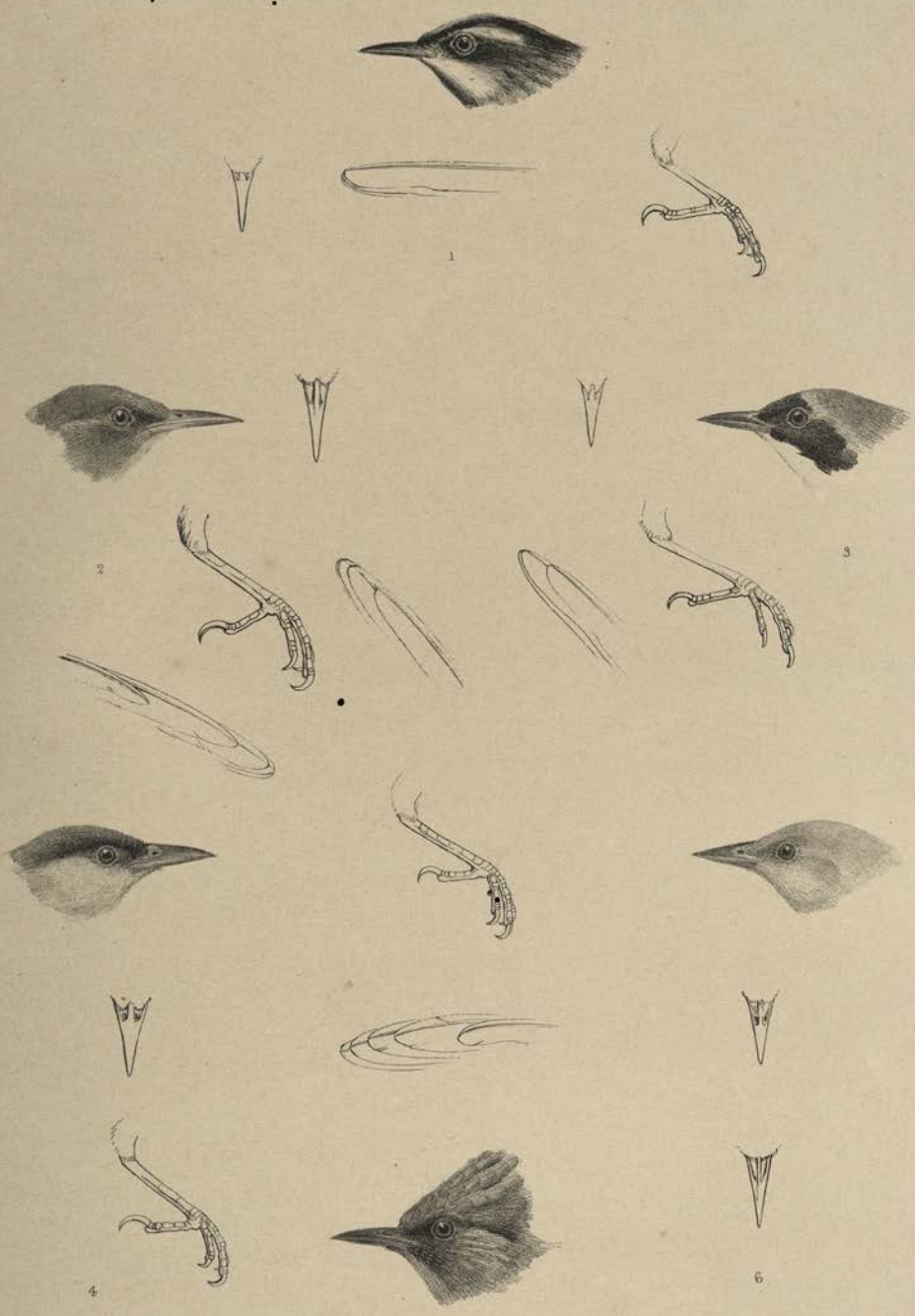
January, 1847.

SYLVICOLINÆ.

PROCLAMATION TESTIMONIAL

Hullmandel & Walton's new Process.

YUHINA
pyrrhoura Hodg.



Wolf del. et lith.

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1. MNIOTILTA varia. 2. ZOSTEROPS chlorononus ? 3. TRICHAS marilandicus. 4. IORA scapularis.
5. YUHINA gularis. 6. HYLOPHILUS poicilotis.

The sixth Subfamily,

MNIOTILTINÆ, or BUSH-CREEPERS,

have the Bill more or less acutely conical, with the culmen sloping, and the sides compressed to the tip, which is slightly emarginated; the gonys long, and advancing upwards; the Nostrils basal, with the opening more or less large, and exposed: the Wings rather long, and generally pointed: the Tail moderate: the Tarsi as long as, or longer than, the middle toe, covered in front with broad scales: the Toes long and slender, with the outer toe usually longer than the inner, and united at its base.

MNIOTILTA *Vieill.**

Bill rather short, conical, and straight, with the culmen gradually curved or sloping, and the sides gradually compressed to the tip, which is slightly emarginated; the lateral margins inflexed; the gonys long, and advancing upwards, and the gape furnished with a few short weak bristles; the nostrils basal, and placed in a short broad groove, with the opening rather large, and partly closed by a membrane. *Wings* long and pointed, with the first quill nearly as long as, or equal with, the second and third, which are equal and longest. *Tail* moderate and broad, with the end of each feather sometimes pointed. *Tarsi* rather longer than the middle toe, slender, and covered in front with broad scales, the divisions of which are sometimes scarcely visible. *Toes* long and slender; the outer toe longer than the inner, and united at its base; the hind toe long, stronger than the others, and armed with a rather strong curved claw.

The species of this division are found, in consequence of their migratory habits, in various parts of the vast continent of America, and its adjacent islands. They are usually observed on trees or low thickets, especially those near rivers or lakes, actively engaged in examining the bark of the trunk and branches, and the leaves of trees, for spiders and other kinds of insects, which constitute their food, both in the perfect and imperfect states. As soon as they have finished their examination of one bush or tree, they pass by a short active flight to another, which undergoes the same scrutiny; and some species are even seen flying about the upper branches of the trees, feeding on the small dipterous insects that frequent such localities. At other times these birds feed on small berries. The nest is generally formed near the ground, in a bush, or in the fork of a low tree, of grass very compactly woven together, and lined with hair and down, in which the female lays five eggs.

* Vieillot established this genus in 1816 (*Analyse*, &c. p. 45.), with which *Oxyglossus* of Mr. Swainson (1827) is synonymous. It embraces *Rhimanphus* of Rafinesque (1819), with which *Ficedula* Cuv. (1799–1800) and *Sylvicola* of Mr. Swainson (1827) are coequal; *Chloris* of M. Boie (1826), with which *Parula* of the Prince of Canino (1838) is synonymous; *Helmitheros* of Rafinesque (1819), with which *Vermivora* of Mr. Swainson (1827) and *Helinaia* of Mr. Audubon (1839) are coequal. It probably embraces *Ægithina* of Vieillot (1816).

1. M. *varia* (Lath.) Vieill — Certhia maculata *Wils.* Am. Orn. pl. 19. f. 3., Audub. B. of Amer. pl. 90.

2. M. *æstiva* (Gmel.) Pl. enl. 58. f. 2. — Motacilla canadensis *Bodd.*; Sylvia citrinella *Wils.* Amer. Orn. pl. 15. f. 6., Vieill. Ois. d'Amér. Sept. t. 95.; Mot. albicollis *Gmel.* Briss. Orn. iii. t. 26. f. 5., Audub. B. of Amer. pl. 95.; Sylvia Childreni *Audub.* pl. 35.; Rhimanphus citrinus *Rafin.*

3. ? M. *carolinensis* (Lath.) Pl. enl. 58. f. 1. — Motacilla rubiginosa *Pall.*

4. M. *aureola* (Gould), Voy. of Beagle, Birds, pl. 28.

5. M. *petechia* (Linn.) Edwards's Birds, pl. 256., Wils. Amer. Orn. pl. 28. f. 4., Vieill. Ois. d'Amér. Sept. t. 91., Faun. Bor. Amer. Birds, pl. 41.

6. M. *discolor* (Vieill.) Ois. d'Amér. Sept. t. 98.— Sylvia minuta *Wils.* Amer. Orn. pl. 25. f. 4., Audub. B. of Amer. pl. 14.

7. M. *tigrina* (Gmel.) Edwards's Birds, pl. 257., Vieill. Ois. d'Amér. Sept. t. 94.

8. M. *montana* (Wils.) Amer. Orn. pl. 44. f. 2., Audub. B. of Amer. pl. 414. — Sylvia tigrina *Pr. Bonap.*

9. M. *parus* (Wils.) Amer. Orn. pl. 44. f. 3., Audub. B. of Amer. pl. 134. — Sylvia autumnalis *Wils.* Amer. Orn. pl. 23. f. 4., Audub. pl. 88.

10. M. *pinus* (Linn.) Edwards's Birds, pl. 277., Wils. Amer. Orn. pl. 19. f. 4., Audub. B. of Amer. pl. 134. — Sylvia Vigorsii *Audub.* B. of Amer pl. 30.

11. M. *striata* (Gmel.) Vieill. Ois. d'Amér. Sept. t. 75, 76. Wils. Amer. Orn. pl. 30. f. 3. pl. 54. f. 4., Audub. B. of Amer. pl. 123.

12. M. *castanea* (Wils.) Amer. Orn. pl. 14. f. 4., Audub. B. of Amer. pl. 69.

13. M. *pennsylvanica* (Linn.) Edwards's Birds, pl. 301., Wils. Amer. Orn. pl. 14. f. 5., Vieill. Ois. d'Amér. Sept. t. 90. — Motacilla icterocephala *Linn.* Pl. enl. 731. f. 2., Audub. B. of Amer. pl. 59.

14. M. *Blackburniæ* (Gmel.) Vieill. Ois. d'Amér. Sept. t. 96., Wils. Amer. Orn. pl. 23. f. 3., Audub. B. of Amer. pl. 135.

15. M. *virens* (Gmel.) Edwards's Birds, pl. 300., Vieill. Ois. d'Amer. Sept. t. 92., Wils. Amer. Orn. pl. 17. f. 3., Audub. B. of Amér. pl. 399.

16. M. *superciliosa* (Bodd.) Pl. enl. 686. f. 1. — Motacilla pensilis *Gmel.* Vieill. Ois. d'Amér. Sept. t. 72., Wils. Amer. Orn. pl. 12. f. 6.; M. flavicollis *Gmel.* Catesby, Carol. pl. 62., Audub. B. of Amer. pl. 85.

17. M. *maritima* (Wils.) Amer. Orn. pl. 54. f. 3., Pr. Bonap. Amer. Orn. pl. 3. f. 3., Voy. l'Isle de Cuba, Ois. t. 10.

18. M. *maculosa* (Gmel.) Edwards's Birds, pl. 255., Vieill. Ois. d'Amér. Sept. t. 93., Faun Bor. Amer. Birds, pl. 40., Audub. B. of Amer. pl. 414.—Sylvia magnolia *Wils.* Amer. Orn. pl. 23. f. 2.

19. M. *palmarum* (Gmel.) Vieill. Ois. d'Amer. Sept. t. 73., Pr. Bonap. Amer. Orn. pl. 10. f. 2. — Motacilla ruficapilla *Gmel.* ? Voy. l'Isle de Cuba, Ois. t. 8.

20. M. *coronata* (Linn.) Edwards's Birds, pl. 298., Vieill. Ois. d'Amér. Sept. t. 78, 79., Wils. Amer. Orn. pl. 17. f. 4., pl. 45. f. 3.—Motacilla umbria *Linn.* Pl. enl. 709. f. 1.; M. cincta et M. pinguis *Gmel.*; M. canadensis *Linn.* Audub. B. of Amer. pl. 153.

21. M. *formosa* (Wils.) Amer. Orn. pl. 25. f. 3., Audub. B. of Amer. pl. 38.

22. M. *canadensis* (Linn.) Pl. enl. 685. f. 2., Edwards's Birds, pl. 252., Wils. Amer. Orn. pl. 15. f. 7. — Motacilla cærulescens *Gmel.* Vieill. Ois. d'Amér. Sept. t. 80., Audub. B. of Amer. pl. 155., Voy. l'Isle de Cuba, Ois. t. 9.

23. M. *rara* (Wils.) Amer. Orn. pl. 27. f. 2.

24. M. *pumila* (Vieill.) Ois. d'Amér. Sept. t. 100.

25. M. *americana* (Linn.) Swains. — Motacilla eques *Bodd.* Pl. enl. 731. f. 1.; Sylvia pusilla *Wils.* Amer. Orn. pl. 28. f. 3.; S. torquata *Vieill.* Ois. d'Amér. Sept. t. 99.; M. ludoviciana *Gmel.* Briss. Orn. iii. t. 26. f. 4.; Type of Parula *Pr. Bonap.* 1838.

26. M. *venusta* (Temm.) Pl. col. 293. f. 1. — Sylvia pitiayumi *Vieill.* Azara, No. 109.; S. plumbea *Swains.* Zool. Illustr. pl. 139.; Sylvicola minuta *Swains.*

27. M. *speciosa* (Pr. Max.) Pl. col. 293. f. 2., Azara, No. 107.?

28. M. *decurtata* (Pr. Bonap.) Proc. Z. S. 1837. p. 118.

29. M. *Townsendii* (Aud.) B. of Amer. pl. 318. f. 1.

30. M. *Rathbonia* (Aud.) B. of Amer. pl. 65.

31. M. *occidentalis* (Towns.) Audub. B. of Amer. pl. 395. f. 3, 4.

32. M. *Audubonii* (Towns.) Audub. B. of Amer. pl. 395. f. 1, 2.

33. M. *aurantia* (Bodd.) Pl. enl. 58. f. 3.—Motacilla chrysocephala *Gmel.*

34. M. *macropus* (Vieill.) — Sylvia pusilla *Wils.* Amer. Orn. pl. 43. f. 4.; S. sphagnosa *Pr. Bonap*; S. leucoptera *Wils.*; S. palustris *Steph.*

35. M. *eoa* (Gosse), B. of Jam. p. 158., Illustr. B. of Jam. pl. 34.

36. M. *pannosa* (Gosse), B. of Jam. p. 162.

37. M. *pharetra* (Gosse), B. of Jam. p. 163., Illustr. pl. 38.

38. M. *tæniata* (Dubus), Bull. Acad. Reg. Belg. and Rev. Zool. 1848. p. 245.

39. M. *vermivora* (Lath.) Audub. Edwards's Birds, pl. 305; Wils. Amer. Orn. pl. 24. f. 4., Audub. B. of Amer. pl. 34.— Vermivora fulvicapilla *Swains.*; Helmitheros migratorius *Rafin.* Azara, No. 154.; Type of Helmitheros *Rafin.* (1819).

40. M. *Swainsoni* (Audub.) B. of Amer. pl. 198.

41. M. *citrea* (Bodd.) Pl. enl. 704 f. 2.—Motacilla pronotoraria *Gmel.* Wils. Amer. Orn. pl. 24. f. 3., Audub. B. of Amer. pl. 3., Vieill. Ois. d'Amér. Sept. pl. 83.

42. M. *solitaria* (Wils.) Amer. Orn. pl. 15. f. 4., Edwards's Birds, pl. 277. f. 1.

43. M. *chrysoptera* (Linn.) Edwards's Birds, pl. 299., Wils. Amer. Orn. pl. 15. f. 6., Pr. Bonap. Amer. Orn. pl. 1. f. 3., Vieill. Ois. d'Amér. Sept. pl. 97.—Motacilla flavifrons *Gmel.*

44. M. *Bachmani* Audub. B. of Amer. pl. 185.

45. M. *peregrina* (Wils.) Amer. Orn. pl. 25. f. 2., Faun. Bor. Amer. pl. 42. f. 2., Audub. B. of Amer. pl. 154.—Sylvia Tenessæi *Vieill.*

46. M. *carbonata* Audub. B. of Amer. pl. 60.

47. M. *nigrescens* (Towns.) Audub. B. of Amer. pl. 395. f. 5, 6.

48. M. *ruficapilla* (Wils.) Amer. Orn. pl. 27. f. 3., Faun. Bor. Amer. pl. 42. f. 1., Audub. B. of Amer. pl. 89.—Sylvia leucogastra *Shaw*; S. Nashvillei *Vieill.*

49. M. *celata* (Say), Pr. Bonap. Amer. Orn. pl. 5. f. 2., Audub. B. of Amer. pl. 178.

50. M. *bicolor* (Vieill.) Ois. d'Amér. Sept. t. 90*.

51. M.? *viridicata* (Vieill.) Hartl. N. Dict. d'Hist. Nat. ii. p. 171., Azara, No. 156.

52. M. *cærulescens* (Pr. Max.) Beitr. p. 713.

53. M. *ochroleuca* (Gmel.).

54. M. *juncorum* (Gmel.).

55. M. *ruficauda* (Gmel.).

56. M. *fuscicollis* (Gmel.).

57. M. *striata* (Forst.) Mill. Cim. Phys. pl. 15. A. B.

58. M. *incana* (Gmel.).

59. M. *murina* (Gmel.).

60. M. *auricollis* (Gmel.) Briss. Orn. iii. t. 26. f. 1.

61. M. *dominica* (Linn.) Briss. Orn. iii. t. 27. f. 3.
62. M. *semitorquata* (Gmel.).
63. M. *fulva* (Gmel.).
64. M. *fusca* (Gmel.)
65. M. *calidris* (Linn.) Edwards's Birds, pl. 121. f. 2.
66. M. *bananivora* (Gmel.).
67. M. *lineata* (Gmel.).
68. M. *gularis* (Mill.) Cim. Phys. pl. 30. C.
69. M. *ardosiacea* (Vieill.).
70. M. *pyrrhonotus* (Vieill.) N. Dict. d'Hist. Nat. ii. 178., Azara, No. 163.
71. M. *ruficapilla* (Vieill.) N. Dict. d'Hist. Nat. ii. 179., Azara, No. 164.
72. M. ? *rubida* (Vieill.) N. Dict. d'Hist. Nat. ii. 203., Azara, No. 166.
73. M. *sylvestris* (Vieill.) Ency. Méth. p. 457., Azara, No. 168.
74. M. *pyrrholeuca* (Vieill.) Ency. Méth. p. 480., Azara, No. 231.
75. M. *ruficollis* (Vieill.) Ency. Méth. p. 476., Azara, No. 240.
76. M. *albifrons* (Vieill.) N. Dict. d'Hist. Nat. ii. p. 276.
77. M. *melanorhoa* (Vieill.) Ency. Méth. p. 444.
78. M. *chrysopus* (Vieill.) N. Dict. d'Hist. Nat. ii. p. 208.
79. M. *virescens* (Lath.) — Sylvia viridicans *Shaw*.
80. ? M. *leucoptera* (Vieill.) Ois. d'Amér. Sept. ii. t. 84. — Type of Ægithina *Vieill.* (1816).

Trichas *Swains.**

Bill moderate, strong, and straight, with the culmen gradually curved, and the sides compressed to the tip, which is acute and slightly emarginated; the lateral margins inflexed; the gonys long and ascending, and the gape furnished with a few weak bristles; the nostrils basal, and placed in a short broad groove, with the opening exposed, and partly closed by a membranous scale. *Wings* moderate; with the first quill much shorter than the second, which is rather shorter than the third and fourth. *Tail* moderate and broad. *Tarsi* rather longer than the middle toe, and covered in front with broad scales. *Toes* moderate; with the lateral toes equal, and the outer toe slightly united at the base; the hind toe long, strong, and armed with a strong curved claw.

The species of this genus are found both in North and South America. They live in the low bushes, continually seeking among the leaves for the caterpillars, spiders, and other kinds of insects that reside on them. If alarmed, they dart into the midst of the bush, and remain quiet until the cause of alarm has subsided. At times they even search for insects that hide in the fallen leaves that lie beneath the bushes. The nest is placed on the barren or swampy ground, or in a mossy limb of a fallen tree, composed outwardly of withered leaves and grass, lined interiorly with hair. Sometimes it is furnished with a dome-shaped covering. The female deposits from four to six eggs.

1. T. *marilandicus* (Briss.) Pl. enl. 709. f. 2., Edwards's Birds, pl. 237. — Motacilla trichas *Gmel.* Wils. Amer. Orn. pl. 6. f. 1. t. 18. f. 4.; Trichas personatus *Swains.*; Sylvia Roscoe *Audub.*; Regulus? mystaceus *Steph.*
2. T. *velatus* (Vieill.) Swains. Ois. d'Amér. Sept. t. 74. — Sylvia canicapilla *Pr. Max.* Swains. Zool. Ill. pl. 174., Azara, No. 155.
3. T. *æquinoctialis* (Gmel.) Pl. enl. 685. f. 1., Vieill. Ois. d'Amér. Sept. t. 81.
4. T. *Philadelphia* (Wils.) Bonap. Wils. Amer. Orn. pl. 14. f. 6. — Sylvia agilis *Wils.* Amer. Orn. pl. 39. f. 4.
5. T. *brachydactylus* (Swains.) Two Cent. and a Quart. 295.
6. T. *leucoblepharus* (Vieill.) Dict. d'Hist. Nat., Azara, No. 153. — Trichas superciliosus *Swains.*
7. T. *bivittatus* (D'Orb. & Lafr.) Lafr. Synop. Av. p. 51.
8. T. *nigrocristatus* Lafr. Rev. Zool. 1840. p. 230.
9. T. *ruficeps* (D'Orb. & Lafr.) Synop. Av. p. 10.
10. T. *concolor* (D'Orb. & Lafr.) Synop. Av. p. 10.
11. T. *Macgillivrayi* Audub. B. of Amer. pl. 399. f. 4, 5.
12. T. *Delafieldii* Audub. Orn. Biogr. v. p. 307.

Zosterops *Vig. & Horsf.*†

Bill moderate, and slightly curved, with the culmen curved, and the sides compressed to the tip, which is acute and emarginated; the gonys long, and slightly ascending; the gape furnished with a few

* Mr. Swainson established this division in 1827.
† This genus was established by the late Mr. Vigors and Dr. Horsfield in 1825.

very short weak bristles; the nostrils basal, and placed in a broad groove, with the opening closed by a lunate scale. *Wings* moderate; with the first quill very small, and the fourth and fifth equal and longest. *Tail* moderate, broad, and slightly emarginated in the middle. *Tarsi* rather longer than the middle toe, and covered in front with broad scales. *Toes* rather long; with the outer toe rather longer than the inner, and united at its base; the hind toe long, strong, and armed with a long curved claw.

The species of this genus are found in India and its isles, Africa, and Australia. They are inhabitants of the forests jungles, thickets, and gardens, and are usually observed singly or in pairs, and at times in great numbers, moving actively among the branches of the trees or thickets, searching with the most careful scrutiny the leaves and flowers, for various kinds of insects, upon which they feed. Their flight is quick and darting, even while proceeding from tree to tree. The nest is composed of grass, moss, and wool, lined with fibrous roots and fine grass. The eggs are usually three in number.

1. Z. *madagascariensis* (Linn.) Briss. Orn. iii. t. 28. f. 2. — Sylvia annulosa *Swains.* Zool. Illustr. pl. 164.; Zosterops flavigula *Swains.* Levaill. Ois. d'Afr. t. 132.
2. Z. *borbonica* (Bodd.) Pl. enl. 705. f. 2. — Zosterops cinereus *Swains.*
3. Z. *palpebrosa* (Temm.) Pl. col. 293. f. 3.
4. Z. *nicobarica* (Blyth), Journ. A. S. B. xiv. p. 563.
5. Z. *lateralis* (Lath.) G. R. Gray, Lamb. Icon. ined. iii. 34. — Zosterops dorsalis *Vig. & Horsf.*; Sylvia annulosa var. *Swains.* Zool. Ill. pl. 165., Gould, B. of Austr. iv. pl. 81.; Z. tenuirostris *Gould,* Proc. Z. S. 1837. p. 76.; Certhia cærulescens *Lath.* Lamb. Icon. ined. ii. 66.; C. diluta *Shaw;* Philedon cæruleus *Cuv.*
6. Z. *albogularis* Gould, Proc. Z. S. 1836. p. 75.
7. Z. ——. — Zosterops chloronotus *Gould,* Proc. Z. S. 1840. p. 165., B. of Austr. iv. pl. 82.
8. Z. *lutea* Gould, B. of Austr. iv. pl. 83.
9. Z. ——. — Zosterops flava *Swains.* B. of W. Afr. pl. 3.
10. Z. *abyssinica* Guer. Rev. Zool. 1834 p. 165.
11. Z. *chloronotus* (Vieill.) Ois. dor. t. 28. — Certhia borbonica *Gmel.* Pl. enl. 681. f. 2.; Zosterops curvirostris *Swains.*
12. Z. *pallida* Swains. Two Cent. and a Quart. p. 294.
13. Z. *ambigua* Swains. Two Cent. and a Quart. p. 295.
14. Z. *conspicillata* Kittl. Mém. de l'Acad. St. Petersb. 1835. ii. t. 4., Kittl. Küpf. t. 19. f. 1.
15. Z. *flava* (Horsf.) Hartl. Linn. Trans. xiii. p. 170.
16. Z. ——. — Sylvia flava *Meyen,* Act. Leop. Kittl. Küpf. t. 19. f. 2.
17. Z. —— Homb. & Jacq. Voy. au Pole Sud, Ois. t. 19. f. 3.
18. Z. —— Homb. & Jacq. Voy. au Pole Sud, Ois. t. 19. f. 4.
19. Z. —— Homb. & Jacq. Voy. au Pole Sud, Ois. t. 20. f. 6.
20. Z. *westernensis* (Quoy & Gaim.) Hartl. Voy. de l'Astrol. Ois. t. 11. f. 2.
21. Z. *javanica* (Horsf.) Hartl. Linn. Trans. xiii. p. 156.
22. Z. *lugubris* Hartl. Rev. Zool. 1848. p. 109.

YUHINA *Hodgs.**

Bill rather long, and slightly curved, with the culmen curved, and the sides compressed to the tip, which is acute and emarginated; the lateral margins slightly inflexed; the gonys long, and slightly ascending, and the gape furnished with a few bristles; the nostrils basal, and placed in a large groove, with the opening closed by a large lunate scale. *Wings* rather long, and rounded; with the first three quills graduated, and the fourth nearly as long as the fifth, which is the longest. *Tail* moderate and broad, with the end of each feather somewhat pointed. *Tarsi* longer than the middle toe, covered in front with broad scales, with the divisions sometimes scarcely visible. *Toes* rather long, with the outer toe longer than the inner, and united at its base; the hind toe long, strong, and armed with a strong curved claw.

It is on the elevated mountains of Northern India that the species of this genus are found. They usually live in small flocks in the vast jungles; preferring low bushy trees, in the midst of which they are seen hopping actively

* Mr. Hodgson established this genus in 1831; the same author has also proposed the following divisions for subdividing the species: *Polyodon* (1844), *Ixulus* (1845), and *Myzornis* (1848).

among the branches in search of insects that generally harbour among the foliage; and they also feed on small berries.

1. Y. *gularis* Hodgs. Journ. A. S. B. 1837. p. 231., As. Res. xix. p. 166.
2. Y. *occipitalis* Hodgs. Journ. A. S. B. 1837. p. 231.—Type of Polyodon *Hodgs.* (1844).
3. Y. *flavicollis* Hodgs. Journ. A. S. A. 1837. p. 232.—Type of Ixulus *Hodgs.* (1845).
4. Y. *nigrimentum* Hodgs. Journ. A. S. B. (1845) p. 592.
5. Y. *pyrrhoura* Hodgs. Journ. A. S. B. (1843) p. 984.—Type of Myzornis *Hodgs.* (1843).

Iora *Horsf.**

Bill rather long, strong, and straight, with the culmen sloping, and the sides compressed to the tip, which is slightly curved and emarginated; the gonys long and ascending; the gape furnished with a very few weak bristles; the nostrils basal, and placed in a membranous groove, with the opening anteriorly rounded and exposed. *Wings* moderate and rounded; with the first three quills graduated, and the fourth to the sixth equal and longest. *Tail* moderate, broad, and rounded on the sides. *Tarsi* longer than the middle toe; the front covered with scarcely divided scales. *Toes* moderate; the outer toe longer than the inner, and united at the base; the hind toe rather long, strong, and armed with a strong curved claw.

The species of this division are inhabitants of India and its archipelago. They are usually observed in the open spaces of the forests and jungles, and sometimes on the trees and bushes near houses, hopping actively among the small branches and twigs of trees, while busily engaged in examining leaf by leaf for insects, both in the perfect and imperfect states, and spiders, that live among them; at the same time uttering a loud warbling or querulous sort of note. Their flight is short, generally only from tree to tree; and it is performed by a series of quick vibrations of the wing.

1. I. *tiphia* (Linn.) Edwards's Birds, pl. 79. — Iora scapularis *Frankl.*; Motacilla subviridis *Tick.*
2. I. *ceylonica* (Gmel.) Brown, Ill. pl. 15. f. 2.; Levaill. Ois. d'Afr. t. 141.—Ægithina quadricolor *Vieill.*; Iora tiphia var. nigra *Sundev.*; I. meliceps *Horsf.*; Muscicapa cambayensis *Lath.*; Fringilla multicolor *Gmel.*?
3. I. *scapularis* Horsf. Linn. Trans. xiii. p. 152.
4. I. *Lafresnayi* Hartl. Mag. de Zool. 1845. t. 60. — Iora innotata *Blyth?*
5. I. ? *familiaris* Kittl. Mém. de l'Acad. St. Petersb. 1835. i. p. 235. t. 13.

Hylophilus *Temm.*†

Bill moderate, strong, and straight, with the culmen sloping, and the sides compressed to the tip, which is acute and slightly emarginated; the gonys moderate and ascending; the gape furnished with a few short weak bristles; the nostrils basal, and placed in a membranous groove, with the opening towards the front, and exposed. *Wings* rather short, and rounded; with the fifth quill the longest, and the first to the fourth graduated. *Tail* long and rounded. *Tarsi* much longer than the middle

* Dr. Horsfield established this genus in 1820.
† Established by M. Temminck in 1823?

toe, and covered in front with scarcely divided scales. *Toes* short, with the outer toe longer than the inner, and united at its base; the hind toe long, and armed with a moderate curved claw.

It is in South America that the species which compose this genus are found.

1. H. *poicilotis* (Temm.) Pl. col. 173. f. 2.
2. H. *thoracicus* (Temm.) Pl. col. 173. f. 1.
3. H. *flaveolus* (Pr. Max.) Beitr. p. 719.
4. H. *ruficeps* Pr. Max. Beitr. iii. p. 725.
5. H. *semibrunneus* Lafr. Rev. Zool. 1845. p. 341.
6. H. *flavipes* Lafr. Rev. Zool. 1845. p. 342.
7. H. *leucophrys* Lafr. Rev. Zool. 1844. p. 81.
8. H. *olivaceus* Tschudi, Fauna Per. p. 24.
9. H. *frontalis* Tschudi, Fauna Per. p. 25. t. 13. f. 1.
10. H. *cinerascens* Pr. Max. Beitr. iii. p. 723.

December, 1848.

Hullmandel & Walton Lithographers

MACRONYX
Ameliæ DeTarr.

Wolf del. et lith. Printed by Hullmandel & Walter.

1. MOTACILLA alba. 2. ERYTHIANURA albifrons. 3. ANTHUS malayensis. 4. LESSONIA nigra. 5. GRALLINA cyanoleuca.
6. ENICURUS Leschenaultii. 7. MUSCISAXICOLA mentalis. 8. MUSCIGRALLA brevicauda.

The seventh Subfamily,

MOTACILLINÆ, or WAGTAILS,

have the Bill moderate, generally slender and straight, with the culmen curved at the end, and the sides much compressed to the tip, which is emarginated; the gonys long and ascending; the Nostrils lateral and placed in a small groove; the Wings long and pointed; the Tail more or less long, and usually even; the Tarsi long, slender, and covered in front with transverse scales; the Toes more or less long, the lateral ones unequal, and the outer slightly united; the Claws long, slightly curved, and acute, that of the hind toe sometimes very long.

LESSONIA *Swains.**

Bill moderate, rather slender, straight, and pointed, with the culmen straight to the tip, which is emarginated, the lateral margins and gonys slightly ascending; the nostrils lateral, placed in a groove, with the opening anterior, oval, and partly clothed with the frontal plumes. *Wings* long and pointed; with the first and second quills equal, and as long as the fifth; the third rather longer than the last, and, as well as the second, pointed at the end; the fourth the longest. *Tail* moderate, broad, and slightly emarginated. *Tarsi* longer than the middle toe, slender, and covered by an almost undivided scale in front. *Toes* rather short; with the outer toe rather longer than the inner, and slightly united at the base; the hind toe moderate, and armed with a very long, rather curved, and acute claw.

The single species of this genus is found on the humid plains and margins of rivers, on the elevated mountains of South America. It is migratory, appearing in the warmest localities during the winter; and is usually observed on the ground, whence it takes short rapid flights, and occasionally runs quickly after insects that fly near the surface of the earth. It also feeds on small worms and seeds. The nest is concealed amongst the stalks of herbage that grow on the plains or on the margins of water courses.

L. *nigra* (Bodd.) Pl. enl. 738. f. 2.—Alauda fulva *Lath.*; Anthus sordidus *Less.*; Lessonia erythronotus *Swains.*; Anthus variegatus *Gerv. & Eyd.* Mag. de Zool. 1836. Ois. t. 67.; Alauda rufa *Less.*; Sylvia dorsalis *King.*

* Established by Mr. Swainson in 1831 (*Fauna Boreali-Americana*, p. 490.).

Muscisaxicola *D'Orb. & Lafr.**

Bill moderate, slightly depressed, and straight, with the culmen slightly curved, and the sides much compressed to the tip, which is emarginated, the lateral margins straight, and the gonys long and scarcely ascending; the nostrils lateral, oval, and partly concealed by the projecting plumes. *Wings* long, and pointed; with the first quill nearly as long as the second and third, which are equal and longest. *Tail* moderate, broad, and slightly emarginated. *Tarsi* longer than the middle toe, slender, and covered in front with transverse scales. *Toes* moderate; with the outer toe somewhat longer than the inner, and slightly united at the base; the hind toe rather short, and armed with a rather long curved claw.

These birds are found in South America. "They frequent," says Mr. Darwin, "the open places, as the sandy dunes, rocky coasts, and sea-beaches, or near the summits of the high mountains, where vegetation and other birds cease to occur. They are usually observed in very small flocks, hopping and flying from stone to stone, at the same time frequently jerking and spreading out their tail like a fan. Small insects form their chief subsistence."

1. M. *rufivertex* D'Orb. & Lafr. Syn. Av. p. 66., Voy. dans l'Amér. Mér. Ois. t. 40. f. 2.
2. M. *mentalis* D'Orb. & Lafr. Syn. Av. p. 66., Voy. dans l'Amér. Mér. Ois. t. 40. f. 1.
3. M. *maculirostris* D'Orb. & Lafr. Syn. Av. p. 66., Voy. dans l'Amér. Mér. Ois. t. 41. f. 2.
4. M. *striaticeps* D'Orb. & Lafr. Syn. Av. p. 66., Voy. dans l'Amér. Mér. Ois. t. 41. f. 1.
5. M. *albifrons* (Tschudi), Fauna Peruana, p. 16., Ois. t. 12. f. 2.
6. M. *Macloviana* (Garn.) Voy. de la Coqu. Zool. i. p. 663.
7. M. *brunnea* Gould, Voy. of Beagle, Birds, p. 84.

Muscigralla.†

Bill moderate and straight, with the culmen slightly curved at the tip, which is emarginated, the sides compressed, and the gonys long and slightly ascending; the nostrils lateral, with the opening oval and partly concealed by the frontal plumes. *Wings* short; with the first quill shorter than the second, third, and fourth; these are equal, and rather shorter than the fifth, which is the longest of all. *Tail* short and even. *Tarsi* much longer than the middle toe, very slender, and covered in front with a series of transverse scales; the tibia very long, the exposed part half the length of the tarsus, and covered in front with transverse scales. *Toes* rather short; the outer toe rather shorter than the inner, and united at its base; the claws rather long, compressed, curved, and acute.

The type of this genus is found on the high lands of South America.

M. *brevicauda* D'Orb. & Lafr. Voy. dans l'Amér. Mér. Ois. t. 39. f. 1.

* Established by M. D'Orbigny and the Baron de Lafresnaye in 1837 (*Syn. Avium*, p. 65.). *Ptionura* of Mr. Gould (1841) is synonymous.

† M. D'Orbigny and Baron de Lafresnaye established this genus in 1837 (*Syn. Avium*, p. 61.) M. Cabanis changed the name to *Ochthites* in 1840.

MOTACILLA *Linn.**

Bill moderate, straight, and slender, with the culmen slightly curved, and the sides much compressed to the tip, which is emarginated, the lateral margins nearly straight and inflexed, and the gonys long and ascending; the nostrils lateral, with the opening oval and partly concealed by a membrane. *Wings* lengthened and pointed; with the first quill almost as long as the second and third, which are equal and longest. *Tail* very long, generally even, but sometimes forked. *Tarsi* longer than the middle toe, slender, and covered in front with slightly divided scales. *Toes* moderate; with the lateral toes nearly equal, the outer one slightly united at its base; the hind toe long, and armed with a long more or less curved claw.

The species of this genus are found in most parts of the world. They frequent banks of rivers, moors, and meadows that are occasionally overflowed, plains, and open places; often wading in the shallow streams and pools of water up to the knee, while in pursuit of their food, which consists of small insects, larvæ, and worms. They are in continual motion, either running with great rapidity, or flying for a trifling distance near the surface of the ground, while capturing their food on the wing. They migrate at certain seasons of the year, and their flight is interrupted and performed by jerks. It is in a heap of stones upon the ground that the female forms her nest, though sometimes she selects holes on the top of a decayed tree. The nest is composed of moss, fibres of roots, and grass, intermixed with wool and lined with hair. The eggs are usually five or six in number.

1. M. *alba* Linn. Pl. enl. 652. — Motacilla albeola *Pall.*, Gould, B. of Eur. pl. 143.; M. cinerea *Bodd.* Pl. enl. 674. f. 1.
2. ? M. *Yarrellii* Gould, B. of Eur. pl. 141.
3. M. *lugubris* Temm. Man. d'Orn. i. 253. — Motacilla albeola var. *Pall.* Gould, B. of Eur. pl. 142.; M. lugens *Ill.* Kittl. Kupf. Vög. t. 21. f. 1.; M. leucoptera *Vigors*, Krusentr. Voy. t. 85.
4. M. *luzoniensis* Scop. Sonn. Voy. t. 29. — Motacilla leucopsis *Gould*; M. alboides *Hodgs.*; M. Hodgsoni *Bl.*; M. dukhunensis *Sykes*.
5. M. *madaraspatensis* Gmel.
6. M. *capensis* Linn. Pl. enl. 28. f. 2., Levaill. Ois. d'Afr. t. 178. 177., Kittl. Kupf. Vög. t. 21. f. 2. — Motacilla afra *Gmel.*
7. M. *longicauda* Rüpp. Faun. Abyss. Ois. t. 29. f. 2.
8. M. *indica* Gmel. — Motacilla variegata *Vieill.*; M. picata *Frankl.* Levaill. Ois. d'Afr. t. 179.
9. M. *cærulescens* Lath. Lamb. Icon. ined. ii. 59.
10. M. *boarula* Penn. Brit. Zool. i. 492., Edwards's Birds, pl. 259., Pl. enl. 28. f. 1. — Motacilla sulphurea *Bechst.*; M. melanope *Pall.*; Type of Calobates *Kaup* (1829).
11. M. *citreola* Pall. Fl. iii. p. 696. — Motacilla citrinella *Pall.* Gould, B. of Eur. pl. 144.: M. sheltobriuschka *Lepech*, Iter. ii. t. 8. f. 1.; M. aureocapilla *Less.*; M. calcarata *Hodgs.*
12. M. *campestris* Pall. — Motacilla flava *Ray*, Gould, B. of Eur. pl. 145.; M. flaveola *Temm.*; Budytes Rayi *Pr. Bonap.*
13. M. *flava* Linn. Pl. enl. 674. f. 2., Edwards's Birds, pl. 258., Gould, B. of Eur. pl. 146. — Motacilla flaveola *Pall.*; M. neglecta *Gould*; M. boarula *Linn.*; M. Feldeggii *Michael.*; Budytes beema *Sykes*; M. chrysogastra *Bechst.*; Type of Budytes *Cuv.* (1817).
14. ? M. *cinereocapilla* Savi.
15. ? M. *melanocephala* Savi, Rüpp. Zool. Atlas, t. 33. f. 6., Fauna Pontica, Aves, t. 2.
16. M. *viridis* Gmel. Brown's Illustr. pl. 33.

ENICURUS *Temm.*†

Bill rather long, slightly depressed at the base, and straight, with the culmen mostly straight, but suddenly curved at the tip, which is emarginated, the sides much compressed, the lateral margins straight and inflexed, and the gonys long and ascending; the nostrils lateral and placed in a broad groove,

* Linnæus established this genus in 1735. It embraces *Budytes* of Cuvier (1817), and *Calobates* of Dr. Kaup (1829).
† M. Temminck established this genus in 182–?

with the opening covered by a membranous scale. *Wings* moderate and rounded, with the fourth and fifth quills equal and longest. *Tail* long and deeply forked, or short and even. *Tarsi* longer than the middle toe, rather slender, and covered in front with slightly divided scales. *Toes* rather long and slender; with the outer toe longer than the inner, and slightly united at its base; the hind toe long, and armed with a long, curved, acute claw.

The species that compose this genus are found in the mountains of the continent of India and its archipelago. Dr. Horsfield says of the Javanese species, "that it abounds in the small streams descending rapidly from the hills and shaded by luxuriant shrubs. In the beds of these rivulets, particularly where they abound with rocks and gravel, it is seen running along with alacrity, moving its tail incessantly, and picking up worms and insects."

1. E. *Leschenaultii* (Vieill.) G. R. Gray, N. Dict. d'Hist. Nat. xx. p. 269., Gal. des Ois. t. 145. — Motacilla speciosa *Horsf.*; Enicurus coronatus *Temm.* Pl. col. 113.
2. E. *maculatus* Vigors, Proc. Z. S. 1830. p. 9., Gould, Cent. of B. pl. 27. — Enicurus fuliginosus *Hodgs.*
3. E. *immaculatus* Hodgs. As. Res. xix. p. 190.
4. E. *schistaceus* Hodgs. As. Res. xix. p. 189.
5. E. *ruficapillus* Temm. Pl. enl. 534.
6. E. *diadematus* Mull. Tydsch. 1835. p. 346.
7. E. *velatus* Temm. Pl. col. 160.
8. E. *Scouleri* Vigors, Proc. Z. S. 1831. p. 174., Gould, Cent. of B. pl. 28.

Grallina *Vieill.**

Bill moderate, straight, and slender, with the culmen slightly curved, and the sides compressed to the tip, which is emarginated, the gonys long and slightly ascending; the nostrils lateral, with the opening rounded and exposed. *Wings* long and rounded, with the third to the fifth quills equal and longest. *Tail* moderate, and nearly even. *Tarsi* much longer than the middle toe, strong, and covered in front with broad scales. *Toes* rather short, and strong; with the lateral ones nearly equal, the outer united at its base; the hind toe long, strong, and armed with a moderate, strong, and curved claw.

The type of this genus is found in Australia, where it frequents the sides of the creeks and flats, and rivulets of the interior. According to Mr. Gould this bird is very tame and graceful in its actions, and is often observed about the settlers' houses. It is migratory, and, when about to remove to a fresh locality, congregates in large flocks, which, having reached a temporary resting-place, scatter themselves in small groups around the country, searching for their food, which consists solely of insects in their various states. The flight is performed with a heavy flapping of the wings, though it passes through the air noiselessly, and generally in a straight line. The note uttered by this bird consists of a peculiarly shrill whining whistle, often repeated. The nest is composed of soft mud, sometimes mixed with dried grass, in the form of a cup; and is usually placed on some bare, exposed, horizontal branch. The eggs are two to four in number.

G. *cyanoleuca* (Lath.) G. R. Gray, Lamb. Icon. ined. ii. 20. — Gracula picata *Lath.*; Tanypus australis *Oppel*; Grallina melanoleuca *Vieill.* Gal. des Ois. t. 150., Gould, B. of Austr. pl.

* Vieillot established this genus in 1816 (*Analyse*, &c. p. 42.). *Tanypus* of M. Oppel (1811) was the original name of this genus, but, as that word was previously employed, the above name is adopted.

EPHTHIANURA *Gould.**

Bill moderate, rather depressed, and straight, with the culmen only curved near the tip, which is emarginated, the lateral margin straight and inflexed, the gonys moderate and ascending; the nostrils lateral, placed in a broad groove, with the opening covered by a membranous scale. *Wings* moderate; with the first quill very short; the second nearly as long as the third, fourth, and fifth, which are equal and longest. *Tail* rather short, and even. *Tarsi* longer than the middle toe, and covered in front with transverse scales. *Toes* rather short; with the outer toe longer than the inner, and free at its base; the hind toe long, and armed with a long, slightly curved, and acute claw.

These birds are peculiar to Australia, where, says Mr. Gould, they are found in small flocks on the plains. They usually resort to the ground, perching frequently either on the summit of a stone, or on the extremity of a dead and leafless branch; and are capable of moving over the surface of the ground with amazing quickness, with a motion that can neither be described as a hop nor as a run, but something between the two, accompanied by a bobbing action of the tail.

1. E. *albifrons* (Jard. & Selby), Gould, Jard. & Selby, Illustr. Orn. pl. 56. — Fluvicola leucocephala *Less.*; Cinura torquata *Brehm*, Gould, B. of Austr. pl.

2. E. *aurifrons* Gould, Proc. Z. S. 1837. p. 148., B. of Austr. pl.

3. E. *tricolor* Gould, Proc. Z. S. 1837. p. 159., B. of Austr. pl.

ANTHUS *Bechst.*†

Bill more or less straight and slender, with the culmen almost straight, or slightly curved, and the sides compressed to the tip, which is emarginated, the lateral margins straight and inflexed, the gonys long and ascending; the nostrils lateral, placed in a short broad groove, with the opening rounded and partly closed by a membrane. *Wings* moderate, with the first three quills equal and longest. *Tail* moderate, and emarginated. *Tarsi* longer than the middle toe, rather slender, and covered in front with broad transverse scales. *Toes* long, and rather slender; with the lateral toes equal, and the outer one slightly united at its base; the hind toe long: the claws of the anterior toes rather short and curved, and that of the hind toe very long and acute.

These birds inhabit most parts of the world; some are more usually found on the rocky and open places near the sea-shore, while others prefer the mountains, heaths, marshes, and open cultivated places. Some species are migratory, proceeding northwards for the summer months, and returning to the temperate parts for the winter; while others remain stationary throughout the year. They usually frequent the ground, on which they run with rapidity, and often take short jerking flights, capturing their food, which consists of small insects, larvæ, and worms. During the spring of the year these birds rise with a tremulous and rapid motion of the wings to a great elevation in the air, and then commence their song; descending afterwards with motionless wings and expanded tail, in a gradually slanting direction, towards the

* Mr. Gould established this genus in 1837. *Cinura* of M. Brehm (1844) is synonymous.

† This genus was established in 1802 by Bechstein (*Naturg. Deutsch.*). *Spipola* of Leach (1816), *Corydalla* of Vigors (1825), *Pipastes* and *Leimoniptera* of Dr. Kaup (1829), and *Agrodroma* and *Macronyx* of Mr. Swainson (1837) are synonymous.

earth. The nest is either placed on the ground under the shelter of a tuft of herbage, or on a ledge of rock; and is composed of dry grass intermixed with stalks of plants, and lined with finer grasses or hairs. The eggs are usually four to six in number.

1. A. *spinoletta* (Linn.) Pl. enl. 661. f. 2. — Anthus aquaticus *Bechst.*; Anthus Coutellii *Aud.* Hist. de l'Egypte, Ois. t. 5. f. 5.

2. A. *obscura* (Gmel.) Lewin's Brit. Birds, pl. 94. — Anthus petrosus *Mont.*; A. rupestris *Nils.*; A. littoralis *Brehm*; A. aquaticus *Gould*, B. of Eur. pl. 138.; A. montanus *Koch*, Fauna Borreali Americana, pl. 44.

3. A. *pratensis* (Linn.) Gould, B. of Eur. pl. 136. — Anthus sepiarius *Vieill.* Pl. enl. 660. f. 1.; Type of Leimoniptera *Kaup* (1829).

4. A. *cervinus* (Pall.) Zoogr. i. p. 511. — Anthus pratensis *Eversm.*; A. rufogularis *Brehm*; A. Cæcilii *Aud.* Hist. de l'Egypte, Ois. t. 5. f. 6., Gould, B. of Eur. pl. 140.

5. A. *arboreus* Bechst. Naturg. Deutschl. iii. p. 706., Pl. enl. 660. f. 2. — Motacilla spipola *Pall.*; Alauda turdinæ *Scop.* Gould, B. of Eur. pl. 139., Hist. l'Egypte, Ois. t. 13. f. 5.; Type of Pipastes *Kaup* (1829).

6. A. *campestris* Bechst. Naturg. Deutschl. iii. p. 722. — Anthus rufescens *Temm.* Gould, B. of Eur. pl. 137.; Alauda moselana *Gmel.* Pl. enl. 661. f. 1.; A. grandior *Pall.*; Type of Agrodroma *Swains.* (1837).

7. A. *ludovicianus* (Gmel.) — Alauda rubra *Gmel.* Edwards's Birds, pl. 297.; A. rufa *Wils.* Amer. Orn. pl. 42. f. 4., Audub. B. of Amer. pl. 10.

8. A. *pipiens* Audub. B. of Amer. pl. 80.

9. A. *Richardi* (Vieill.) N. Dict. d'Hist. Nat. xxvi. p. 491. — Anthus rupestris *Menetr.*; Type of Corydalla *Vigors* (1825).

10. A. *rufus* (Gmel.) Pl. enl. 738. f. 1. — Alauda bonariensis *Bodd.*; Anthus variegatus *Vieill.*

11. A. *chii* Vieill. N. Dict. d'Hist. Nat. xxvi. p. 490., Azara, No. 146., Spix, Av. Bras. t. 76. f. 2.

12. A. *correndera* Vieill. N. Dict. d'Hist. Nat. xxvi. p. 491., Azara, No. 145.

13. A. *furcatus* D'Orb. & Lafr. Syn. Av. p. 27.—A. breviunguis *Spix*, Av. Bras. t. 76. f. 1.

14. A. *l'Herminieri* Less. Rev. Zool. 1839. p. 101.

15. A. *paytensis* Less. Compl. de Buff. viii. p. 167.

16. A. *australis* Vig. & Horsf. Linn. Trans. xv. p. 229.

17. A. *bistriatus* (Swains.) Two Cent. and a Quart. p. 316.

18. A. ——— ? — Agrodroma australis *Swains.* Two Cent. and a Quart. p. 316.

19. A. *fuscus* Vieill. N. Dict. d'Hist. Nat. xxiv. p. 490., Azara, No. 147.

20. A. *rufescens* D'Orb. & Lafr. Syn. Av. p. 37.

21. A. *novæ zealandiæ* (Gmel.) Lath. Gen. Syn. pl. 51.—Alauda littorea *Forst.* Descr. p. 90., Icon. ined. 143.

22. A. ——— ? — Alauda novæ zealandiæ var. β. *Lath.* Portl. Voy. pl. p. 37.

23. A. *rufulus* Vieill. N. Dict. d'Hist. Nat. xxvi. p. 495.

24. A. *similis* Jerd. Madr. Journ. Lit. & Sci. 1840. p. 35.

25. A. *agilis* Frankl. Proc. Z. S. 1832. p. 91.

26. A. *malayensis* Eyton, Proc. Z. S. 1839. p. 104.

27. A. *leucophrys* Vieill. N. Dict. d'Hist. Nat. xxvi. p. 502., Gal. des Ois. t. 262.

28. A. *sordidus* Rüpp. Faun. t. 39. f. 1.

29. A. *cinnamomeus* Rüpp. Faun. p. 103.

30. A. *Gouldii* Fras. Proc. Z. S. 1843. p. 27.

31. A. *pœcilopterus* Pr. Max. Beitr. 1. 633.

32. A. *palustris* Meisn. Bull. v. p. 112. xv. p. 152.

33. A. *capensis* (Linn.) Pl. enl. 504. f. 2., Levaill. Ois. d'Afr. t. 195. — Macronyx flavicollis *Swains.* Rüpp. Faun. t. 38. f. 1.; Type of Macronyx *Swains.* (1837).

34. A. *flavigaster* Swains. B. of W. Afr. 216., Jard. & Selby, Ill. Orn. n. s. pl. 22. — Alauda crocea *Vieill.*, Ency. Méth. p. 223. t. 232. f. 2. ?, Levaill. Ois. d'Afr. t. 196.

35. A. *Ameliæ* (De Tarr.) Rev. Zool. 1845. p.

January, 1847.

Hullmandel & Walton Lithographers

PITTA
Cyanea. Blyth.

1. Hypocnemis cinnamomea. 2. Gastrocnemia olivacea. 3. Tyrta affinis. 4. Philepsis [illegible]. 5. Sclerurus caudatus. 6. Formicarius longipes. 7. Tyrtes [illegible].

8. Myrmonus [illegible]. 9. Formicivora [illegible]. 10. Macrocnemis [illegible]. 11. Drachyptera [illegible]. 12. Malacoptera magnum. 13. Grallaria squamigera.

[illegible] TESTIMONIUM

The second Family,

TURDIDÆ, or THRUSHES,

have the Bills of various lengths, and more or less strong, with the culmen generally keeled, curved, and the sides compressed to the tip, which is emarginated; the Nostrils lateral, basal, and generally protected by a membranous scale; the Wings more or less long, and rounded or pointed; the Tail mostly of moderate length; the Tarsi more or less short, and usually covered with transverse scales; the Toes of various lengths, with the outer toe generally longer than the inner one.

The first Subfamily,

FORMICARINÆ, or ANT-THRUSHES,

have the Bill more or less long, and straight, with the culmen curved to the tip, which is emarginated, and sometimes slightly hooked; the sides compressed, and the gonys moderate and ascending; the Nostrils lateral, placed in a membranous groove, with the frontal plumes projecting to the opening, which is exposed; the Wings generally rather short, and rounded; the Tail more or less short, and usually rounded; the Tarsi rather long, and mostly covered in front with slightly divided scales; the Toes long and slender, with the outer toe longer than the inner one, and more or less united at its base.

EUPETES *Temm.**

Bill long, slender, straight, and rather depressed at the base, with the culmen straight through the greater part of its length, but curved and emarginated at the tip; the sides compressed, and the gonys long; the nostrils lateral, and placed at the anterior part of the membranous groove, with the frontal plumes advancing to the opening, which is oblique and exposed. *Wings* short and rounded, with the sixth, seventh, and eighth quills equal and longest. *Tail* long, very broad, and graduated. *Tarsi* lengthened, slender, and the front covered with broad scales. *Toes* rather short, with the outer toe longer than

* Established by M. Temminck (18— ?). *Ajax* (1829) of M. Lesson is synonymous.

the inner, and united at the base, the hind toe moderate; the claws rather short, curved, and acute, that of the hind toe long.

The species are found in India, Sumatra, and New Guinea.

1. E. *macrocercus* Temm. Pl. col. 516.
2. E. *Ajax* Temm. Pl. col. 573. — Type of Ajax *Less.* (1829).
3. E. *cærulescens* Temm. Pl. col. 574.
4. E. *diana* (Less.) Belang. Voy. Ind. Or. Ois. t. 3.

Dasycephala *Swains.**

Bill long, straight, the base wide, and the sides much compressed, with the culmen straight through nearly its whole length, but curved and suddenly hooked at the tip, which is slightly emarginated; the gonys very long, and gradually curved upwards; the nostrils lateral, with the opening large, somewhat rounded, and partly concealed by the frontal plumes and bristles. *Wings* moderate, with the third and fourth quills equal and longest. *Tail* moderate and rounded. *Tarsi* as long as the middle toe, and covered in front with transverse scales. *Toes* long and slender, with the outer toe longer than the inner, and united at the base; the claws long, curved, and acute, that of the hind toe longest.

The species of this genus are found in most parts of South America, and one species in Western Africa: those of the former region frequent the plains and valleys, and are often observed perched on the tops of the bushes that are scattered in such places. Mr. Darwin has several times seen them chasing coleopterous insects on the wing, in a peculiar manner, half-hopping and half-flying; when thus employed, they spread their tail to its full extent.

1. D. *cinerea* (Gmel.) Briss. Ornith. Suppl. t. 9. f. 3., Spix, Av. Bras. t. 26. f. 2. — Tyrannus rufus *Vieill.*
2. D. *thamnophiloides* (Spix), Av. Bras. t. 26. f. 1.
3. D. *rufiventris* (Vieill.) Swains. N. Dict. d'Hist. Nat. xxxv. p. 93., Azara, No. 205.
4. D. *ferruginea* (Less.) Rev. Zool. 1839. p. 138.
5. D. *livida* (Kittl.) Vög. von Chili, t. 1. — Tyrannus gutturalis *Eyd. & Gerv.* Mag. de Zool. 1836. t. 62.; Pitangus chilensis *Less.*
6. D. *striata* (Gould), Voy. of Beagle, Birds, p. 66.
7. D. *microptera* (Gould), Voy. of Beagle, Birds, pl. xii.
8. D. *maritima* (D'Orb. & Lafr.) — Agriornis leucura *Gould*, Voy. of Beagle, Birds, p. 57. pl. xiii.
9. D. (?) *albifrons* (Gmel.) Swains. Pl. enl. 707. f. 1. — Pipra leucops *Vieill.*; Type of Pithys *Vieill.* (1823).
10. D. ? *leucophrys* (Tschudi), Fauna Peruana, p. 19.
11. D. *syndactyla* Swains. B. of W. Afr. 1. p. 261.

Malacopteron *Eyton.*†

Bill long and broad at the base, with the culmen rather elevated, keeled, and slightly curved towards the tip, which is suddenly curved, hooked, and slightly emarginated, the sides much compressed from the middle; the gonys long, and curved upwards; the nostrils lateral, placed in a membranous groove, covered with plumes as far as the opening, which is oblique and partly exposed. *Wings* rather long and rounded, with the first quill short, and the fourth nearly as long as the fifth and sixth, which are

* Established by Mr. Swainson in 1831 (*Fauna Boreali-Americana*, p. 486.). *Agriornis* of Mr. Gould (1838) and *Tamnolanius* of M. Lesson (1839) are synonymous. It probably embraces *Pithys* of M. Vieillot (1823).

† Mr. Eyton established this name in 1839 (*Proc. Zool. Soc.* 1839. p. 102.). *Trichastoma* (1842) and *Alcippe* (1844) of Mr. Blyth are synonymous.

equal and longest. *Tail* rather long, and rounded on the sides. *Tarsi* rather longer than the middle toe, and covered in front with a slightly divided scale. *Toes* rather short, with the outer toe longer than the inner, and united at the base, the hind toe moderate; the claws rather short, curved, and acute.

The species that compose this genus reside in various parts of India: their habits and manners have not yet been recorded by naturalists, but are supposed to be similar to those of the next genus.

1. M. *magnum* Eyton, Proc. Z. S. 1839. p. 103.
2. ? M. *rostratum* Blyth, Journ. A. S. B. 1842. p. 795.
3. M. *cinereum* Eyton, Proc. Z. S. 1839. p. 103.
4. M. *affine* (Blyth), Journ. A. S. B. 1842. p. 795. — Type of Alcippe *Blyth* (1844).
5. M. *ferrugineum* Blyth, Journ. A. S. B. 1844. p. 383.

Brachypteryx *Horsf.**

Bill moderate, and the base broad, with the culmen curved, and the sides compressed to the tip, which is emarginated; the gonys long and ascending; the nostrils lateral, placed in a membranous groove, with the opening anterior, large, and exposed. *Wings* very short and rounded, with the fifth to the seventh quills nearly equal and longest. *Tail* rather short and rounded. *Tarsi* lengthened, and covered by an entire scale. *Toes* very long, with the outer toe longer than the inner, and united at the base, the hind toe long, and armed with a long curved claw.

It is in the thick forests and jungles of Malacca and Java that the species of this genus are found. They are generally seen on the lowest branches of trees in the open parts of the forest, from whence they occasionally make short sallies after insects: but they are also sometimes observed on the ground, searching it for the larvæ of insects, ants, and worms, which are found among the fallen leaves. Their ordinary note consists of a quickly reiterated babbling, and they also possess a protracted plaintive note, which sometimes rises to a high and melodious warbling.

1. B. *montana* Horsf. Linn. Trans. xiii. p. 157.
2. B. *sepiaria* Horsf. Linn. Trans. xiii. p. 158.
3. B. *leucophrys* Temm. Pl. col. 448. f. 1.
4. B. *leptura* Kuhl.
5. B. *malaccensis* Hartl. Rev. Zool. 1844. p. 402.

Macronus *Jard. & Selby.*†

Bill rather long, and slightly depressed at the base, the culmen nearly straight, but curved and with the sides compressed at the tip, which is emarginated; the gonys rather long and ascending; the nostrils lateral, and placed anteriorly in a membranous groove, with the frontal plumes projecting to the opening, which is large, sub-oval, and exposed. *Wings* short and rounded, with the fifth and sixth quills equal and longest. *Tail* moderate, broad, and much rounded. *Tarsi* as long as the middle toe, and covered in front with an almost entire scale. *Toes* long, with the lateral toes nearly equal, the hind toe long and strong; the claws moderate, and that of the hind toe long, curved, and strong.

* Dr. Horsfield established this genus in 1820 (*Linn. Trans.* xiii. p. 157.).

† Established by Sir W. Jardine and Mr. Selby long prior to *Napothera* of M. Boie (1835), which is synonymous, as well as *Turdinus* and *Setaria* (1844) of Mr. Blyth.

FORMICARINÆ.

These birds inhabit the thickest underwood in the dense and lofty jungles of India and its isles. They generally live in small flocks of five or six individuals, and are continually hopping about the low thick brushes and underwood while engaged in searching for ants, small orthoptera and other kinds of insects, on which they chiefly subsist; at the same time uttering an often repeated low twittering note.

1. M. *ptilosus* Jard. & Selby, Illustr. Orn. pl. 151. — Timalia trichorrhis *Temm.*, Pl. col. 594. f. 1.
2. M. *capistratus* (Temm.) Pl. col. 185. f. 1.
3. M. *melanothorax* (Temm.) Pl. col. 185. f. 2.
4. M. *pyrrhogenys* (Temm.) Pl. col. 442. f. 2.
5. M. *epilepidotus* (Temm.) Pl. col. 448. f. 2. — Type of Napothera *Boie* (1835).
6. M. *grammiceps* (Temm.) Pl. col. 448. f. 3.
7. M. *nigrocapitatus* (Eyton), Proc. Z. S. 1839. p. 103
8. M. *atriceps* (Jerd.) Madr. Journ. Lit. & Sci. 1839. p. 250.
9. M. *bicolor* (Less.) Rev. Zool. 1839. p. 138.
10. M. *poliocephalus* (Jerd.).
11. ? M. *albogularis* (Blyth), Journ. A. S. B. 1844. p. 385. — Type of Setaria *Blyth* (1844).
12. M. *striatus* (Blyth), Journ. A.S.B. 1842. p. 783. — Brachypteryx maculatus *Eyton*.
13. M. *macrodactylus* (Strickl.) Ann. Nat. Hist. 1844. p. 417. — Brachypteryx albogularis *Hartl.*; Type of Turdinus *Blyth* (1844).
14. M. *loricatus* (Mull.) Tydsch. 1835. p. 348.

SCLERURUS *Swains.**

Bill lengthened and slender, with the culmen curved towards the tip, which is emarginated, the sides compressed and the lateral margins straight; the gonys long and ascending; the nostrils lateral, basal, with the frontal plumes advancing to the opening, which is lunate, small and exposed. *Wings* moderate and rounded, with the third, fourth, and fifth quills equal and longest. *Tail* moderate, broad, and rounded, with the shaft of each feather slightly projecting and rigid. *Tarsi* as long as the hind toe. *Toes* lengthened and slender, with the outer toe longer than the inner, and united from the base for half its length, the inner toe slightly united to the middle toe, the hind toe very long and rather slender; the claws long, curved, and rather slender.

It is in the tropical portions of America that the species of this genus are found. They live solitary in thickets, hopping continually to the ground, concealing themselves in the bushes, or mounting the trunks of old trees in search of the large fruit-eating ants which abound on them.

1. S. *caudacutus* (Vieill.) N. Dict. d'Hist. Nat. ii. p. 742., Mag. de Zool. 1838. Ois. t. 10. — Tinactor fuscus *Pr. Max.*; Myiothera longirostris *Cuv.*; Oxypyga scansor *Menétr.* Mém. de l'Acad. St. Petersb. 1835. t. 11.; Sclerurus albogularis *Swains.* Birds of Braz. pl. 78.
2. ? S. *ruficollis* Swains. B. of Braz. pl. 79.
3. S. *guatemalensis* (Hartl.) Rev. Zool. 1844. p. 370.

FORMICARIUS *Bodd.*†

Bill more or less long and strong, with the culmen slightly curved, and the sides compressed to the tip, which is emarginated; the gonys rather long and ascending; the nostrils lateral, with the opening placed anteriorly in the membranous groove. *Wings* moderate and rounded, with the fourth and fifth

* Established by Mr. Swainson in 1827 (*Zoological Journal*, iii. p. 356.). *Tinactor* of the Prince of Neuwied (1831) and *Oxypyga* of M. Menétries (1834) are synonymous.

† Boddaert established this genus in 1783. *Myrmornis* of Hermann (1783), *Myrmecophaga* of Lacépède (1800—1801), *Myiothera* of Illiger (1811), *Myrmothera* of Vieillot (1816), and *Myiocincla* of Mr. Swainson (1837), are synonymous. It embraces *Corythopsis* of M. Sundeval (1835), and probably *Ramphocinclus* of Baron de Lafresnaye (1843).

quills equal and longest. *Tail* short and much rounded. *Tarsi* longer than the middle toe, and covered in front with scarcely divided scales. *Toes* moderate, with the outer rather longer than the inner, and united at the base, the hind toe long and strong; the claws moderate, curved, and acute, that of the hind toe long, and more or less curved and acute.

It is in tropical portions of America that these birds are usually seen on the ground or on the trunks of trees, on which they support themselves by means of their tails, searching for ants and other kinds of insects.

1. F. *cayanensis* Bodd. Pl. enl. 821. — Turdus colma *Bodd.*; Myiothera ruficeps *Spix*, Av. Bras. t. 72. f. 1.; Myrmothera tetema et M. fuscicapilla *Vieill.*, Pl. enl. 703. f. 1.
2. ? F. *umbrettus* (Licht.) Cat. Dupl. Berl. Mus. p. 43.
3. F. *torquatus* Bodd. Pl. enl. 700. f. 1. — Turdus formicivorus *Gmel.*; Myioturdus palikour *Menétr.*
4. F. *lineatus* (Gmel.) Pl. enl. 823. f. 1.
5. F. *analis* (D'Orb. & Lafr.) Syn. Avium, p. 14., Voy. dans l'Amér. Ois. t. 6*. f. 1.
6. F. *nigromaculatus* (D'Orb. & Lafr.) Syn. Avium, p. 14., Voy. dans l'Amér. Mér. Ois. t. 6*, f. 2.
7. F. *longipes* (Vieill.) N. Dict. d'Hist. Nat. xvii. p. 321., Swains. Zool. Illustr. pl. 23.—Drymophila gralleria *Swains.*
8. F. *thamnophiloides* (Spix), Av. Bras. t. 52. f. 1, 2. — Myrmothera atricapilla *Vieill.*?; Thamnophilus myiotherinus *Spix.*
9. F. *gularis* (Spix), Av. Bras. t. 41. f. 2., Mém. de l'Acad. Sci. St. Petersb. 1835. t. 2. f. 2. — Myiothera cinerea *Pr. Max.*
10. F. *cirrhatus* (Gmel.) Pl. enl. 643. f. 2. — Myrmothera axillaris *Vieill.*; Myiothera fuliginosa *Ill.*; Formicivora brevicauda *Swains.*; Thamnophilus melanogaster *Spix*, Av. Bras. t. 43. f. 1.
11. F. *unicolor* (Menétr.) Mém. de l'Acad. Sci. St. Petersb. 1835. p. 480. t. 2. f. 1.
12. F. *surinamensis* (Lath.) Lath. Hist. of B. pl. 28. — Muscicapa pygmæa *Lath.*
13. F. *minutus* (D'Orb. & Lafr.) Pl. enl. 831. f. 2.
14. F. *guttatus* (Vieill.) Gal. des Ois. t. 155.
15. F. *Menetriesii* (D'Orb.) Voy. dans l'Amér. Mér. Ois. p. 184.
16. F. *Fresnayanus* D'Orb. Voy. dans l'Amér. Mér. Ois. t. 6. f. 1.
17. F. *superciliosus* (Cuv.) Iconogr. Guer. t. 11. f. 1.
18. F. *mentalis* (Temm.) Pl. col. 179. f. 2.—Myiothera poliocephala *Pr. Max.*
19. F. *olivaceus* (Tschudi), Fauna Peruana, p. 18.
20. F. *axillaris* (Tschudi), Fauna Peruana, p. 18.
21. F. *strictothorax* (Temm.) Pl. col. 179. f. 1, 2. — Lanius guttatus *Licht.*
22. F. *affinis* (D'Orb. & Lafr.) Syn. Avium, p. 13.
23. F. *flammatus* (Strickl.) Ann. Nat. Hist. xiii. p. pl. 13.
24. F. *calcaratus* (Pr. Max.) Beitr. iii, p. 1101. — Type of Corythopis *Sundev.* (1835).
25. F. *torquatus* (Tschudi), Fauna Peruana, p. 19.
26. F. *brachyurus* (Vieill.) Rev. Zool. 1843. p. 66. — Type of Ramphocinclus *Lafr.* (1843).
27. F. *tremulus* (Lafr.) Rev. Zool. 1843. p. 66.
28. F. *gutturalis* (Lafr.) Rev. Zool. 1843. p. 66.

FORMICIVORA *Swains.**

Bill more or less long and strong, with the culmen keeled, slightly curved, and the sides compressed to the tip, which is emarginated; the gonys long and ascending; the nostrils lateral, with the opening rounded, exposed, and placed anteriorly in a small membranous groove. *Wings* rather short, and much rounded, with the fourth quill nearly as long as the fifth and sixth, which are equal and longest. *Tail* rather lengthened, and much rounded. *Tarsi* longer than, or as long as, the middle toe, and covered in front with slightly divided scales. *Toes* long, with the outer toe longer than the inner, and united at the base, the hind toe long; the claws moderate, curved, and acute, that of the hind toe long and strong.

The species that are embraced in this genus reside in the virgin forests of the tropical parts of America: they are either seen solitary or in small flocks of five or six individuals, moving quickly about the lower small branches of the

* Mr. Swainson established this genus in 1824 (*Journ. Zool.* ii. p. 145.). It embraces *Leptorhynchus* of M. Menétries (1832), with which *Holocnemis* of Mr. Strickland (1844) is synonymous; and *Drymophila* of Mr. Swainson (1824), with which *Myrmeciza* G. R. Gray (1841) is synonymous.

trees, or climbing round them in search of minute insects, ants, and small caterpillars, which constitute their chief food. The males utter at times a low harmonious note, which the females respond to by a simple repeated note. The nest is formed on the ground at the base of the large trees, and the female generally deposits five eggs.

1. F. *leucophrys* (Vieill.) N. Dict. d'Hist. Nat. xvii. p. 322. — Formicivora nigricollis *Swains.*; Myiothera superciliaris *Licht.*; Thamnophilus griseus *Spix*, Av. Bras. t. 41. f. 1.?

2. F. *rufatra* (D'Orb. & Lafr.) Syn. Avium, p. 12.

3. F. *deluzæ* (Menétr.) Mém. de l'Acad. Sci. St. Petersb. 1835. p. 484. t. 5. f. 2. — Myiothera leucophrys var. *Licht.*

4. F. *pileata* (Licht.) Cat. Dupl. Berl. Mus. p. 44.

5. F. *rufimarginata* (Temm.) Pl. enl. 132. f. 1, 2. — Myiothera scapularis et M. variegata? *Licht.*

6. F. *ferruginea* (Temm.) Pl. enl. 132. f. 2.

7. F. *loricata* (Licht.) Cat. Dupl. Berl. Mus. p. 44., Mém. de l'Acad. Sci. St. Petersb. 1835. t. 4. f. 1, 2. — Myiothera ruficauda *Pr. Max.*; Drymophila leucopus *Swains*; M. Yarrellii *Leadb.*

8. F. *strigilata* (Pr. Max.) Beitr. iii, p. 1064.

9. F. *squamata* (Licht.) Cat. Dupl. Berl. Mus. p. 44. — Formicivora maculata *Swains.* Mém. de l'Acad. Sci. St. Petersb. 1835. t. 5. f. 1.

10. F. *malura* (Natt.) Temm. Pl. col. 353. — Myrmothera melanoleuca *Vieill.*; Thamnophilus striatus *Spix*, Av. Bras. t. 9. f. 1.?

11. F. ——— ? — Myiothera rufa *Pr. Max.*, Beitr. iii. p. 1095., Mém. de l'Acad. Sci. St. Petersb. 1835. t. 9. f. 1.

12. F. *cærulescens* (Vieill.) N. Dict. d'Hist. Nat. xvii. p. 321., Menétr., Mém. de l'Acad. Sci. St. Petersb. 1835. t. 6.

13. F. *melanaria* (Menétr.) Mém. de l'Acad. Sci. St. Petersb. 1835. p. 500. t. 7. f .

14. F. *cinnamomea* (Gmel.) Pl. enl. 560. f. 2.

15. F. *rufa* (Bodd.) Pl. enl. 644. f. 1. — Turdus rufifrons *Gmel.*

16. F. *attothorax* (Bodd.) Pl. enl. 701. f. 2. — Turdus Alapi *Gmel.*

17. F. *domicilla* (Pr. Max.) Beitr. iii. p. 1058. — Drymophila trifasciata *Swains.*, Zool. Ill. n. 5. pl. 27.; D. bifasciata et D. fasciata *Swains.*; Myiothera leuconota *Spix*, Av. Bras. t. 72. f. 2.

18. F. *atra* (Swains.) Zool. Journ. vi. p. 153. — Thamnophilus aterrimus *D'Orb. & Lafr.*

19. F. *maura* (Menétr.) Mém. de l'Acad. Sci. St. Petersb. 1835. p. 506. — Thamnophilus leuconotus *Spix*, Av. Bras. t. 39. f. 2.?

20. F. *ardesiaca* (Licht.) Pr. Max., Beitr. iii. p. 1055.

21. F. *melanura* (Menétr.) Mém. de l'Acad. Sci. St. Petersb. 1835. p. 508. t. 8.

22. F. ——— Myrmeciza melanura *Strickl.* Ann. of Nat. Hist. 1844. p. 417.

23. F. ——— ? — Formicivora guttata *Less.* Rev. Zool. 1840. p. 353.

24. F. *ruficauda* (Less.) Rev. Zool. 1840. p. 226.

25. F. *fuscipes* (Gmel.)

26. F. *guttata* (Menétr.) Mém. de l'Acad. St. Petersb. 1835. t. 10. f. 1. — Type of Leptorhynchus *Menétr.* (1835).

27. F. *striolata* (Menétr.) Mém. de l'Acad. Sci. St. Petersb. 1835. t. 10. f. 2. — Myiothera maculata *Pr. Max.*, Myrmothera vittata *Vieill.*

Grallaria *Vieill.**

Bill rather strong and broad at the base, with the culmen straight and keeled at the base, and the apical part curved, and the sides compressed to the tip, which is emarginated; the gonys very long and ascending; the nostrils lateral, and placed in a broad membranous groove, with the opening anterior, oval, and exposed. *Wings* moderate and rounded, with the fourth, fifth, and sixth quills equal and longest. *Tail* short and rounded. *Tarsi* very long and slender, with the front covered with broad scales. *Toes* long, with the outer toe longer than the inner and united at the base, the hind toe very long; the claws moderate, compressed, and curved, that of the hind toe very long, much curved, and acute.

It is in the tropical parts of America that the species of this genus are found: they reside in the forests, and are usually observed on the ground in the neighbourhood of large ant-hills, the inhabitants of which constitute their chief food. They run very actively on the ground, and their cry is very acute, and is heard before that of other birds at the break of day. The female usually deposits two eggs on a bed of dried leaves collected together on the ground at the base of a large tree.

* Established by Vieillot in 1816 (*Analyse, &c.*, p. 43.). *Myioturdus* of M. Boie (1826) and *Chamæza* of Vigors (1825) are synonymous.

1. G. *varia* (Bodd.) Pl. enl. 702. — Turdus rex *Gmel.*; T. grallaria *Lath.*; Grallaria fusca *Vieill.* Gal. des Ois. t. 134.
2. G. *ruficapilla* Lafr. Rev. Zool. 1842. p. 333.
3. G. *imperator* Natt.
4. G. *squamigera* Fl. Prev. Voy. de la Venus, Oist. t. 3.
5. G. *guatimalensis* Fl. Prev. Voy. de la Venus, Ois. t. 4
6. G. *brevicauda* (Bodd.) Pl. enl. 706. f. 1. — Turdus tinniens *Gmel.*
7. G. *macularia* (Temm.) Pl. col.
8. G. *marginata* (Pr. Max.) Beitr. iii. p. 1035., Mém. l'Acad. Sci. St. Petersb. 1835. t. 1. — Chamœza meruloides *Vigors*, Jard. & Selby, Ill. Orn. pl. 11.; Turdus brevicauda *Vieill.*
9. G. *nana* Lafr. Rev. Zool. 1842. p. 334.
10. G. *rufula* Lafr. Rev. Zool. 1842. p. 98,
11. G. *olivacea* (Tschudi), Fauna Peruana, p. 19.
12. G. *fusçatra* (Lafr.) Rev. Zool. 1845. p. 341.
13. G. *ochroleuca* (Pr. Max.) Beitr. iii. p. 1032.

Pitta *Vieill.**

Bill moderate, strong and broad at the base, with the culmen elevated at the base, straight, and with the apical part curved, and the sides compressed to the tip, which is slightly emarginated; the gonys long and ascending; the nostrils lateral, and placed in a membranous groove, with the frontal plumes projecting to the opening, which is anterior, oblique, and exposed. *Wings* rather short, with the third and fourth quills equal and longest. *Tail* very short and nearly even. *Tarsi* very long, slender, and broadly scutellated. *Toes* long, with the outer toe longer than the inner and united at the base, the hind toe very long; the claws moderate, curved, and acute, that of the hind toe very long.

The species of this genus are found in India, its Archipelago, Australia, and Western Africa: they frequent the jungles and thick bushes, and are occasionally observed in the gardens and topes in India. It is on the ground that they usually seek their food, which consists of insects and worms; these they generally search for by scratching among the fallen leaves, and they are believed occasionally to feed on berries and fruits. They seem to prefer the neighbourhood of water, and are sometimes observed to play in the shallow streams, not frequently venturing above their knees. If disturbed, they either seek safety by running, which they perform quickly, or by flying to a branch of a neighbouring tree, and remaining concealed for a time among the foliage. They are also said to rest on the topmost branches of decayed trees. The nest is composed of leaves, dry grass, and hairs, on which the female deposits from four to five eggs.

1. P. *cærulea* (Raffl.) Vigors, Linn. Trans. xiii. p. 301.—Pitta gigas *Temm.*, Pl. col. 217.
2. P. *maxima* Forsten, Verh. Natuurl. Gesch. Nederl. p. 14.
3. P. *strepitans* Temm. Pl. col. 333., Jard. & Selby, Ill. Orn. pl — Pitta versicolor *Swains.*
4. P. *cyanea* Blyth, Journ. A. S. B. 1843. p. 1008. — Pitta gigas *Blyth.*
5. P. *iris* Gould, Proc. Z. S. 1842. p. 17., B. of Austr. pl.
6. P. *granatina* Temm. Pl. col. 506. — Pitta coccinea *Eyton.*
7. P. *venusta* Mull. Tydsch. 1835. p. 348., Pl. col. 509.
8. P. *Baudii* Mull. Verh. Natuurl. Gesch. Nederl. Ois. t. 2.
9. P. *cyanura* (Gmel.) Pl. enl. 355. — Myiothera affinis *Horsf.*
10. P. *Boschii* Mull. Verh. Natuurl. Gesch. Nederl. t. 1. — Pitta elegans, Voy. de la Bin. Ois. t. 3.
11. P. *Irena* Mull. — Pitta elegans *Temm.* Pl. col. 591.
12. P. *cyanoptera* Temm. Pl. col. 218.
13. P. *velata* Temm. Pl. enl. 257. — Citta hippocrepis *Wagl.*; Turdus macrourus fasciatus *Bodd.*
14. P. *brachyura* (Linn.) Temm. Pl. enl. 258. — Turdus triostegus *Sparrm.*, Mus. Carls. t. 84.; Pitta bengalensis *Vieill.*
15. P. *Vigorsii* Gould, B. of Austr. pl. — Pitta brachyura *Vigors. & Horsf.*
16. P. *abdominalis* Wagl., Edwards's Birds, pl. 324., Gould, Cent. of B. pl., Royle, Illustr. Himal. pl. 7. f. 3., Albin, pl. 31., Gray, Illustr. Ind. Zool. 11. pl. 35. f. 2
17. P. *malaccensis* Scop. Sonn. Voy. 11. t. 110. — Citta superciliaris *Wagl.*
18. P. *angolensis* Vieill. N. Dict. d'Hist. Nat. iv. p. 356. — Pitta pulih *Fras.*
19. P. *cucullata* Hartl. Ann. Nat. Hist. 1844. p. 410. pl. 11. — Pitta rhodogaster *Hodgs.*; P. nigricollis *Blyth.*
20. P. *Macklotii* Temm. Pl. col. 547.
21. P. *celebensis* Forsten, Verh. Natuurl. Gesch. Nederl. p. 16.
22. P. *erythrogaster* Temm. Pl. col. 212., Griff. An. Kingd. 1. pl. p. 545.

* Vieillot established this genus in 1816 (*Analyse, &c.*, p. 42.). Thunberg in 1821 gave these birds the generic name of *Brachyurus*. It embraces *Paludicola* of Mr. Hodgson (1837), which name he changed to *Heleornis* in 1844.

23. P. *melanocephala* Forsten, Verh. Natuurl. Gesch. Nederl. p. 19.
24. P. *atricapilla* Müll. Verh. Natuurl. Gesch. Nederl. p. 19.
25. P. ———. — Pitta malaccensis *Mull.* Verh. &c. p. 19.
26. P. *novæ guineæ* Mull.—Pitta atricapilla *Quoy & Gaim.* Voy. de l'Astrol. Ois. t. 8. f. 3.
27. P. *macrorhyncha* Gray, Zool. Misc. p. 3.
28. P. *brevicauda* (Bodd.) Pl. enl. 89.— Pitta atricapilla *Temm.*; P. melanocephala *Wagl.*; P. philippensis *Vieill.*
29. P. *arvensis* Gray, Griff. An. Kingd. i. pl. in p. 530.
30. P. *nipalensis* Hodgs. Journ. A. S. B. 1837. p. 103. — Pitta nuchalis *Blyth*; Type of Paludicola *Hodgs.* (1837).
31. P. *cyanuroides* Less.

Philepitta *I. Geoffr.**

Bill nearly as long as the head, and rather broader than high, with the culmen gradually curved, and the sides compressed to the tip, which is entire; the gonys long and straight; the nostrils lateral, and placed in a broad membranous groove, with the opening somewhat oblique and linear. *Wings* moderate. *Tail* very short and even. *Tarsi* as long as the middle toe, and covered in front with broad transverse scales. *Toes* long and strong, with the outer toe longer than the inner, and united at the base; the hind toe long and strong; the claws long, compressed, curved, and acute. The head is sometimes furnished with caruncles.

The Island of Madagascar is the peculiar locality for the two species of this genus. Their habits and manners are at present unknown.

1. P. *sericea* I. Geoffr. Mag. de Zool. 1839. Ois. t. 8.
2. P. *Geoffroyi* O Des Murs, Rev. Zool. 1846. p. 241.

Myiophonus *Temm.*†

Bill moderate, with the sides much compressed, and the culmen curved to the tip, which is emarginated; the gonys long and ascending; the nostrils lateral, placed in a short broad membranous groove, with the opening anterior, rounded, and exposed. *Wings* long and rounded, with the fifth and sixth quills equal and longest. *Tail* rather long and rounded. *Tarsi* very long, and covered in front with an entire scale. *Toes* long, with the outer toe longer than the inner, and united at the base; the hind toe long and strong; the claws rather long, strong, and much curved.

It is in the jungles of India and Java that the species of this genus are observed, hopping about on the ground in search of insects and worms, which constitute their chief food, but they occasionally feed on fruits and berries. If seen on trees, it is usually on the lower branches, such as are only a few feet above the ground.

1. M. *flavirostris* (Horsf.) Vigors, Linn. Trans. xiii. p. 149.—Myiophonus metallicus *Temm.* Pl. col. 170.
2. M. *Temminckii* Vigors, Proc. Z. S. 1831. p. 171., Gould, Cent. of B. pl. 20. — Myiophonus nitidus *Gray.*
3. M. *Horsfieldii* Vigors, Proc. Z. S. 1831. p. 35., Gould, Cent. of B. pl. 24.
4. M. *cyaneus* (Horsf.) Linn. Trans. xiii. p. 149. — Pitta glaucina *Temm.* Pl. col. 194.; Type of Arrenga *Less.* (1831).

* M. Isidore Geoffroy established this genus in 1838.
† It is uncertain at what date this genus was established by M. Temminck, but it is long prior to *Arrenga* and *Myiophaga* of M. Lesson (1831), which are synonymous.

HYDROBATA *Vieill.**

Bill moderate, slender, and slightly bent upward, with the culmen straight but curved, and the sides compressed to the tip, which is slightly emarginated; the gonys long and ascending; the nostrils lateral, and placed in a membranous groove, with the frontal plumes projecting to the opening, which is lunate and exposed. *Wings* moderate and rounded, with the first quill spurious, the second rather shorter than the third and fourth, which are the longest. *Tail* very short and nearly even. *Tarsi* as long as the middle toe, and covered in front with an entire scale. *Toes* moderate, with the outer toe rather longer than the inner, and united at the base; the claws rather long, curved, compressed, and acute.

The species that compose this genus are found in Europe, Asia, and America. They generally live singly or in pairs in the mountainous districts, and always on the borders of streams. They dive below the surface, and are capable of remaining submerged for some time, while occupied in pursuing the larvæ of insects. In general they are seen perched on some projecting stone in the middle of the water, and are constantly in motion, at the same time moving their tail, which is usually carried rather erect, upwards and downwards. The nest is generally built on a projecting rock over the stream, and is composed outwardly of moss, lined with the decayed leaves of trees. The eggs are four or five in number.

1. H. *cinclus* (Linn.) Pl. enl. 940. — Cinclus aquaticus *Bechst.*; Hydrobata albicollis *Vieill.*; C. europæus *Steph.* Gould, B. of Eur. pl. 83.

2. ? H. *melanogaster* (Temm.) Gould, B. of Eur. pl. 84.

3. H. *Pallasii* (Temm.) Man. d'Ornith. p. ., Gould, B. of Eur. pl. 85. ♂

4. ? H. *asiatica* (Swains.) Faun. Bor. Amer. 11. p. 174. — Cinclus Pallasii *Gould*, Cent. of B. pl.

5. H. *unicolor* (Pr. Bonap.) — Cinclus Pallasii *Pr. Bonap.* Amer. Orn. pl. 16. f. 1.; C. americanus et C. mexicanus *Swains.* Audub. B. of Amer. pl. 370.

6. H. *leucocephala* (Tschudi), Fauna Peruana, p. 19.

* Vieillot established this genus in 1816 (*Analyse, &c.* p. 42.). It was originally formed by Bechstein, under the name of *Cinclus*, in 1802; but that word was employed by Mœhring, 1752.

December, 1846.

Hullmandel & Walton Lithographers

TURDUS
castaneus (Gould)

Ballmann del. et Neuen Lithographen

1. MIMUS polyglottus. 2. BESSUNORNIS albicapilla. 3. CHATOPS frenatus.
4. ZOOTHERA monticola. 5. TURDUS viscivorus.

The second Subfamily,

TURDINÆ, or THRUSHES,

have the Bill as long as, or longer than, the head, and strong, with the culmen curved, and the sides compressed to the tip, which is generally emarginated; the Nostrils lateral, and placed in a small groove, with the opening exposed: the Wings moderate; with the first quill very short; the third and fourth, and sometimes the fifth, the longest: the Tail long, broad, even, or graduated: the Tarsi long; and covered with an entire scale, or several broad scales, in front: the Toes long; the outer toe longer than the inner, and united at the base; the hind toe long and strong: the Claws moderate, curved, and acute.

CHÆTOPS *Swains.**

Bill moderate, with the culmen curved, and the sides compressed to the tip, which is emarginated; the gonys long and ascending; the nostrils basal and lateral, with the opening placed in a large membranous groove, linear and exposed. *Wings* very short and rounded, with the third to the sixth quills equal and longest. *Tail* moderate, broad, and rounded. *Tarsi* longer than the middle toe, strong, and broadly scutellated in front. *Toes* moderate; the outer toe longer than the inner, and united at its base; the hind toe long and strong; the claws small, curved, and acute.

The typical species of this genus is an inhabitant of South Africa.

C. *frenatus* (Temm.) Pl. col. 385.—Chætops Burchellii *Swains.*

ZOOTHERA *Vigors.*†

Bill elongated, curved, and strong, with the culmen curved, and the sides much compressed to the tip, which is hooked and slightly emarginated; the gape furnished with weak bristles; the nostrils lateral and placed in a small groove, with the opening oval and exposed. *Wings* rather short, and rounded; with the first quill very short; the second much shorter than the third, which is rather shorter than the fourth and fifth; these are equal and longest. *Tail* rather short, and even. *Tarsi*

* Established by Mr. Swainson in 1831 (*Faun. Bor. Amer.*). *Argya* of M. Lesson (1831) is synonymous.
† The late Mr. Vigors established this genus in 1831 (*Proc. Zool. Soc.* 1831, p. 172.). *Myiophaga* of M. Lesson (1831) is coequal.

shorter than the middle toe, rather strong, and covered in front with an entire scale. *Toes* rather long and strong; the outer toe rather longer than the inner, and united at the base; the hind toe long and strong; the claws moderate, curved, and acute.

The species inhabit Nepal and the Indian Archipelago.

1. Z. *monticola* Vigors, Proc. Z. S. 1831. p. 172., Gould, Cent. of Birds, pl. 22. — Turdus rostratus *Hodgs.*

2. Z. *Andromeda* (Temm.) Hartl. Pl. col. 392.— Type of Myiophaga *Less.* 1831.

Turdus *Linn.**

Bill as long, or nearly as long, as the head, with the culmen curved, and the sides gradually compressed to the tip, which is emarginated; the gonys long, and rather ascending; the gape furnished with short weak bristles; the nostrils basal and lateral, with the opening oval and exposed. *Wings* moderate; with the first quill very short; the second rather shorter than the third and fourth, which are equal, and longest. *Tail* moderate, broad, and slightly emarginated. *Tarsi* as long as the middle toe, and covered in front by an entire scale. *Toes* moderate; the outer toe rather longer than the inner, and slightly united at the base; the claws moderate, curved, and acute.

These birds are found in all parts of the globe. They are of a shy disposition, and are in a greater or less degree of migratory habits; thus the European species appear in the more temperate parts during the winter, when several of the species are observed in large flocks, and return to the northern countries on the approach of summer. Some of the species more usually frequent the forests, outskirts of woods, the thickets and bushes of extensive pastures and meadows, while others prefer rocky mountainous countries for their retreat. Worms, larvæ of insects, and the animals of shells form their chief subsistence, while in the winter they resort to the berries of various plants. Many of the species emit a loud whistling note, which during some seasons is turned into a pleasing song, that is usually poured forth from the highest branches of small trees. The nest is formed of coarse grass and moss, or wool closely interwoven, with the inside sometimes plastered with a composition of rotten wood and clay. It is usually placed in bushes, or on the sides of large trees. The eggs are four or five in number.

1. T. *viscivorus* Linn. Pl. enl. 489., Gould, B. of Eur. pl. 77. — Type of Ixocossyphus *Kaup* (1829).

2. T. *pilaris* Linn. Pl. enl. 490. Gould, B. of Eur. pl. 76. — Turdus musicus *Pall.*; Type of Arceuthornis *Kaup* (1829).

3. T. *musicus* Linn. Pl. enl. 406., Gould, B. of Eur. pl. 78. f. 1. — Turdus pilaris *Pall.*

4. T. *iliacus* Linn. Pl. enl. 51., Gould, B. of Eur. pl. 78. f. 2.

5. T. *pallidus* Gmel. Gould, B. of Eur. pl. 80. — Turdus pallens *Pall.*; T. iliacus var. pallidus *Naum.*

6. T. *auroreus* Pall. Zoogr. i. p. 448. — Turdus Bechsteinii *Naum.* Vog. Deutschl. t. 69. f. 2.; Type of Cichloides *Kaup* (1829).

7. T. *varius* Horsf. Linn. Trans. xiii. p. 149. Zool. Res. in Java, pl. . — Type of Oreocincla *Gould* (1837).

8. T. *lunulatus* Lath. Lamb. Icon. ined. ii. 41. — Oreocincla novæ hollandiæ *Gould*; Turdus varius *Vig. & Horsf.*

9. T. *macrochynchus* Gould, Proc. Z. S. 1837, p. 145.

10. T. *Whitei* Eyton, Rarer Brit. Birds, p. 92., Gould, B. of Eur. pl. 81.

11. ? T. *Dauma* Lath. — Turdus varius (*Horsf.*) *Blyth*; Turdus Whitei (*Eyton*) *Hodgs.*; Oreocincla parvirostris *Gould.*

12. T. *mollissimus* Blyth, Journ. A. S. B. 1842, p. 188. — Oreocincla rostrata *Hodgs.* Ann. of Nat. Hist. xv. 326.; Turdus viscivorus *Hodgs.*; T. oreocincloïdes *Hodgs.*

13. T. *micropus* Hodgs. App. List of Mamm. and Birds, p. 154.

14. T. *modestus* Eyton, Proc. Z. S. 1839. p. 103.

15. T. *merula* Linn. Pl. enl. 2. 555. Gould, B. of Eur. pl. 72. — Merula vulgaris *Ray*; Type of Merula *Leach* (1816.).

* Established by Linnæus in 1735. *Merula* of Leach (1816), *Ixocossyphus, Arceuthornis, Cichloides,* and *Copsichus* of Dr. Kaup (1829) are coequal. It embraces *Monticola* of M. Boie (1842); this name he changed to *Petrocossyphus* in 1826, with which *Petrocincla* of Vigors is synonymous. *Petrophila* of Mr. Swainson (1837), which name, having already been employed, was changed by me to *Orocetes* in 1840, and also *Geocichla* of Dr. Kuhl (182?) are synonymous with the name given above.

16. T. *torquatus* Linn. Pl. enl. 516. 182., Gould, B. of Eur. pl. 73. — Type of Copsichus *Kaup* (1829).

17. T. *sibiricus* Pall. — Turdus leucocillus *Pall.*; T. atrocyaneus *Homeyer.*

18. T. *obscurus* Gmel.

19. T. *Naumanni* Temm. Man. d'Orn. i. p. 170. — Turdus dubius *Naum.* Vog. Nacht t. 4. f. 8., Gould, B. of Eur. pl. 79.

20. T. *ruficollis* Pall. Reise, iii. p. 694.

21. T. *atrogularis* Natt. Gould, B. of Eur. pl. 75. — Turdus Bechsteinii *Naum.* Vog. Deutschl. t. 69. f. 1.; T. dubius *Bechst.*

22. T. *fuscatus* Pall. Zoogr. i. p. 451.

23. T. *castaneus* (Gould), Proc. Z. S. 1835, p. 185. — Turdus rubrocanus *Hodgs.*

24. T. *albicollis* Royle, Ill. Bot. pl. 8. f. 3. — Turdus collaris *Soret*; Merula nivicollis *Hodgs.*

25. T. *pœcilopterus* Vigors, Proc. Z. S. 1831, p. 54., Gould, Cent. of Birds, pl. 14. — Merula brunnea *Blyth.*

26. T. *similimus* Jerd. Madr. Journ. Lit. & Sci. 1839, 253. — Turdus nigropileus *Lafr.*

27. T. *Wardii* Jerd. Ill. Ind. Orn. pl. — Turdus picaoïdes *Hodgs.*; Zoothera melanoleuca *Hartl.*

28. T. *erythrogaster* Vigors, Proc. Z. S. 1831, p. 171., Gould, Cent. of Birds, pl. 13. — Petrocincla rufiventris *Jard. & Selby*, Ill. Orn. pl. 129.; Petrocossyphus ferrugineoventris *Less.*

29. T. *fumidus* Müll. & Sch. Verh. Nat. Gesch. Neder. p. 109.

30. T. *cardis* Temm. Pl. col. 518.

31. T. *eunomus* Temm. Pl. col. 514.

32. T. *chrysolotus* Temm. Pl. col. 557.

33. T. *Daulias* Temm. Pl. col. 515.

34. T. *hypopyrrhus* Hartl. Cat. Birds, Brem. Mus. p. 43.

35. T. *olivaceus* Linn. Briss. Orn. ii. t. 22. f. 3., Levaill. Ois. d'Afr. t. 98, 99, 100.

36. T. *Urovang* Gmel. Briss. Orn. ii. t. 25. f. 2., Pl. enl. 557. f. 2.

37. T. *africanus* Jacq. Vog. p. 29. t. 14.

38. T. *obscurus* Smith, Ill. Zool. of S. Afr. Birds, pl. 36.

39. T. *strepitans* Smith, Ill. Zool. of S. Afr. Birds, pl. 37.

40. T. *libonyana* Smith, Ill. Zool. of S. Afr. Birds, pl. 38.

41. T. *guttatus* Vigors, Proc. Z. S. 1832, p. 62., Smith, Ill. Zool. of S. Afr. Birds, pl. 39.

42. T. *simensis* Rüpp. Faun. Abyss. t. 29. f. 1.

43. T. *brunneus* Bodd. Pl. enl. 556. f. 2., Edw. Birds, pl. 296. — Turdus minor *Gmel.* Vieill. Ois. d'Amér. t. 63., Faun. Bor. Amer. Birds, pl. 36.; Muscicapa guttata *Pall.*

44. T. *mustelinus* Gmel. Vieill. Ois. d'Amér. t. 62. — Turdus melodus *Wils.* Amer. Orn. pl. 2. f. 1., Audub. B. of Amer. pl. 73.

45. T. *fuscescens* Shaw. — Turdus Wilsonii *Pr. Bonap.*; T. mustelinus *Wils.* Amer. Orn. pl. 43. f. 3., Audub., B. of Amer. pl. 164.

46. T. *solitarius* Wils. Amer. Orn. pl. 43. f. 2., Faun. Bor. Amer. Birds, pl. 35., Audub. B. of Amer. pl. 58.

47. T. *silens* Swains. Fauna, Bor. Amer. Birds, p. 186.

48. T. *nævius* Gmel. — Orpheus meruloïdes *Swains.* Fauna Bor. Amer. Birds, p. 187. pl. 38., Audub. B. of Amer. pl. 369. f. 2, 3., Kittl. Kupf. t. 25. f. 1.

49. T. *migratorius* Linn. Pl. enl. 556. f. 1., Wils. Amer. Orn. pl. 2. f. 2., Vieill. Ois. d'Amér. t. 60, 61., Audub. B. of Amer. pl. 131., Kittl. Kupf. t. 25. f. 2. — ? Turdus.

50. T. *fuscatus* Vieill. Ois. d'Amér. t. 57. bis.

51. T. *nanus* Audub. B. of Amer. pl. 419. f. 1.

52. T. *magellanicus* King, Proc. Z. S. 1830, p. 14. — Turdus falklandicus *Quoy & Gaim.*; T. maluinarum *Licht.*

53. T. *chochi* Vieill. — Turdus rufiventris *Licht.* Spix, Av. Bras. t. 68.

54. T. *olivaceus* D'Orb. & Lafr. — Turdus fumigatus *Licht.* Cat. Dupl. Berl. Mus. No. 438.

55. T. *crotopezus* Ill. — Turdus albiventer *Spix*, Av. Bras. t. 69.; T. albicollis *Vieill.* ?; T. tristis *Swains.* ?

56. T. *gigas* Fras. Proc. Z.S. 1840, p. 59.

57. T. *ferrugineus* Pr. Wied. Beitr. iii. p. 649.

58. T. *carbonarius* Ill. Spix, Av. Bras. t. 67. f. 2.

59. T. *rubripes* Temm. Pl. col. 409., Voy. l'Ile de Cuba, Ois. t. 4.

60. T. *Grayii* Pr. Bonap. Proc. Z.S. 1837, p. 118.

61. T. *fuscater* D'Orb. & Lafr. Syn. Av. p. 16., Voy. dans l'Amér. Mér. t. 9. f. 1.

62. T. *chiguanco* D'Orb. & Lafr. Syn. Av. p. 16., Voy. dans l'Amér. Mér. t. 9. f. 2.

63. T. *serranus* Tschudi, Fauna Peruana, p. 20.

64. T. *rufiterques* Hartl. Rev. Zool. 1844, p. 214.

65. T. *aurantius* Gmel. Sloan. Jam. pl. 256. f. 2. — Turdus leucogenys *Lath.*; Merula saltator *Hill.*; M. jamaicensis *Briss.*

66. T. *jamaicensis* Gmel. — Merula leucophthalma *Hill.*

67. T. *infuscatus* Lafr. Rev. Zool. 1844, p. 41.

68. T. *rufo-palliatus* Lafr. Rev. Zool. 1844, p. 259.

69. T. *montanus* Lafr. Rev. Zool. 1844, p. 167.

70. T. *L'Herminieri* Lafr. Rev. Zool. 1844, p. 167.

71. T. *badius* Lath. White's Voy. pl. in p. 157.

72. T. *poliocephalus* Lath. — Turdus fuliginosus *Lath.* Lamb. Icon. ined. ii. 42.; Merula nestor *Gould.* Jard. & Selby's Ill. Orn. n. s. pl. 37.

73. T. *borbonicus* Gmel. Briss. Orn. ii. t. 24. f. 3.

74. T. *amboinensis* Gmel. Seba, i. t. 62. f. 4.

75. T. *philippensis* Gmel.

76. T. *asiaticus* Lath.

77. T. *viridis* Gmel. — Turdus virescens *Lath.*

78. T. *persicus* Lath.

79. T. *indicus* Bodd. Pl. enl. 564. f. 1.

80. T. *cinereus* Gmel. Briss. Orn. t. 25. f. 3.

81. T. *albicollis* Vieill. N. Dict. d'Hist. Nat. xx. p. 226.

82. T. *dentirostris* Vieill. N. Dict. d'Hist. Nat. xx. p. 233.

83. T. *leucomelas* Vieill. N. Dict. d'Hist. Nat. xx.

84. T. *brevicaudus* Vieill. N. Dict. d'Hist. Nat. xx. p. 239.

85. T. *melanocephalus* Vieill. Encyc. Méth. p. 648.

86. T. *brachyurus* Vieill. N. Dict. d'Hist. Nat. xx. p.

87. T. *cinereus* Vieill. N. Dict. d'Hist. Nat. xx. p. 264.

88. T. *leucopterus* Vieill. N. Dict. d'Hist. Nat. xx. p. 272.

89. T. *flavipes* Vieill. N. Dict. d'Hist. Nat. xx. p. 277., Spix, Av. Bras. t. 67. f. 2.

90. T. *abyssinicus* Gmel.

91. T. *barbaricus* Gmel.

92. T. *tripolitanus* Gmel.

93. T. (?) *nigricapillus* Vieill. Levaill. Ois. d'Afr. t. 108.

94. T. *pacificus* Gmel. Ellis, Icon. ined. 18. ?

95. T. *ulietensis* Gmel. — Turdus badius *Forst.* Desc. Anim. p. 239., Icon. ined. 146.

96. T. *sandwichensis* Gmel.

97. T. *eyana* Linn. Pl. enl. 250, Edw. Birds, pl. 18. — Merula cœrulea *Briss*; Turdus solitarius *Gmel.* Gould, B. of Eur. pl. 87.

98. T. *affinis* Blyth, Journ. As. Soc. 1843, p. 177.*

99. T. *saxatilis* Linn. Pl. enl. 562. — Lanius infaustus *Gmel.*; Saxicola montana *Koch*; Type of Petrocossyphus *Boie* (1826).

100. T. *manillensis Bodd.* Pl. enl. 636. — Turdu manillensis *Gmel.*; T. olivaceus *Bodd.* Pl. enl. 564. f. 2.; Petrocincla pandoo et P. maal *Sykes.*

101. T. *philippensis* Bodd. Pl. enl. 339. — Turdus eremita *Gmel.*

102. T. *melanotus* Dubus, Bull. Acad. Sc. Brux. 1839, pt. 1. p. 506. t.

103. T. *rupestris* Vieill. Levaill. Ois. d'Afr. t. 101, 102. — Turdus rupicola *Licht.*; P. rocar *Steph.*; Petrocincla montana *Swains.*

104. T. *explorator* Vieill. Levaill. Ois. d'Afr. t. 103. — Turdus perspicax *Shaw*, Nat. Misc. pl. 961.

105. T. *cinclorhynchus* Vigors, Gould. Cent. of B. pl. 19. — Petrophila cyanocephala *Swains.*

106. T. *castaneocollis* Lep. Rev. Zool. 1840, p. 166.

107. T. *aurantiventer* Lep. Rev. Zool. 1840, p. 166.

108. T. *citrinus* Lath. Pl. col. 445. — Turdus cyanotus *Jard. & Selby*, Ill. Orn. pl. 46.; Type of Geocichla *Kuhl* (1828).

109. T. *rubecula* Gould, Proc. Z. S. 1836, p. 7.

110. T. *interpres* Kuhl, Pl. col. 458.

111. T. *rubiginosus* Müll. & Sch. Verh. Nat. Gesch. Nederl. p. 172.

112. T. *unicolor* Tick. Jour. A. S. B. 11. p. 577.

113. T. ——— ? — ? Turdus unicolor *Gould*, 1837, p. 136.; T. modestus *Blyth.*

114. T. *flavirostris* Swains. Mag. Phil. 1827, p. 369.

Bessonornis *Smith.**

Bill more or less short, with the culmen gradually curved, and the sides compressed to the tip, which is emarginated; the gonys moderate and ascending; the lateral margins nearly straight: the nostrils lateral and basal, with the opening oval, placed in a small membraneous groove, and partly covered by the projecting feathers. *Wings* moderate and rounded, with the fourth or fifth quill the longest. *Tail* more or less long, broad, and rounded. *Tarsi* rather longer than the middle toe, slender, and covered in front with an entire scale, or with several slightly divided scales. *Toes* moderate and weak; with the outer longer than the inner one, and united at the base; the hind toe long; the claws moderate, curved, and acute.

These birds are found throughout the continent of Africa. They inhabit the borders of woods or high brushwood that grows in the neighbourhood of rivers. Their food consists of insects, which they actively seek for among the foliage; but some species are more frequently seen on the ground searching for the same kind of subsistence. When engaged in this occupation they often raise and depress the tail by jerks, and now and then spread and elevate the wings at the same time.

1. B. *vociferans* (Swains.) Zool. Illustr. pl. 179., Levaill. Ois. d'Afr. t. 104.; Turdus reclamator *Vieill.*

2. B. *phœnicurus* (Gmel.) Levaill. Ois. d'Afr. t. 111. — Motacilla pectoralis *Shaw*, Nat. Misc. pl. 965.; Saxicola superciliaris *Licht.*; Petrocincla superciliosa *Swains.*

3. B. *natalensis* (Smith) Ill. Zool. S. Afr. Birds, pl.

4. B. *humeralis* (Smith) Ill. Zool. S. Afr. Birds, pl.

5. B. *albicapilla* (Vieill.) N. Dict. d'Hist. Nat. xx. p. 254. — Petrocincla leucoceps *Swains.* B. of W. Afr. 1. p. 282.

6. B. ——— ? — Petrocincla albicapilla *Swains.* B. of W. Afr. pl. 32.

7. B. *semirufa* (Rüpp.) Faun. Abyss. p. 81., Syst. Uebers. &c. t. 21. — Cossypha nigricapilla *Guer.*

8. B. *gutturalis* (Guer.) Rev. Zool. 1843, p. 162.

9. B. *poensis* (Strickl.) Ann. Nat. Hist. xv. p. 126.

10. B. *brevipes* (Waterh.) App. Alex. Exped. Disc. S. Afr.

Mimus.†

Bill rather long and straight or slightly curved, with the culmen curved and the sides gradually compressed to the tip, which is more or less emarginated; the gonys long, and rather ascending; the

* This division was originally established by Vigors under the name of *Cossypha* (1825), which, being previously employed, occassioned me to adopt Dr. Smith's name as given above.

† Established by Boie in 1826. *Orpheus* of Mr. Swainson (1827) is synonymous. It embraces *Toxostoma* of Wagler (1831), with which *Harpes* of Mr. Gambel (1845) is coequal.

gape furnished with short bristles; the nostrils lateral, basal, with the opening placed in a small groove, oval, and exposed. *Wings* moderate and rounded; with the first quill very short; the second much shorter than the third, which is rather shorter than the fourth and fifth, and sometimes to the seventh, which are equal and longest. *Tail* lengthened, broad, and graduated. *Tarsi* as long as the middle toe, strong, and covered in front with broad scales. *Toes* rather long; the outer toe rather longer than the inner, and united at the base; the hind toe long and strong; the claws moderate, curved, and acute.

The species of this genus are found throughout both continents of America, as well as the West Indies and Galapagos Islands. They are migratory, shy, though lively birds, usually seen in the forests, or near the houses, hopping with a quick motion from branch to branch. Some prefer the dry sterile regions near the coast, while others seek the plains and valleys thinly scattered with stunted and thorn-bearing trees. Their food consists of various kinds of insects, berries, and worms. During the spring of the year most of the species possess a most pleasing song, and they are also capable of imitating in the highest degree, even in the wild state, the notes of other birds; as well as all manner of noises. When pouring forth their song they generally seat themselves upon the elevated twig of a low bush, and usually elevate their tail and spread their wings at the same time. The nest is usually placed in a bush or small tree. It is composed of twigs and sticks intermixed with straw and wool, lined interiorly with fine fibrous roots. The eggs are five in number.

1. M. *polyglottus* (Linn.) Wils. Amer. Orn. pl. 10. f 1. — Orpheus leucopterus *Vigors.*

2. ? M. *orpheus* (Linn.) Edw. Birds pl. 78., Vieill. Ois. de l'Amér. Septr. t. 68.

3. ? M. *dominicus* (Linn.) Pl. enl. 558. f. 1. — Merula dominicensis *Briss.*

4. M. *gilvus* (Vieill.) Ois. de l'Amér. Sept. t. 68.*

5. M. *lividus* (Licht.) — Turdus orpheus *Spix*, Av. Bras. t. 71. f. 2.

6. M. *thenka* (Mol.) Chili, p. 222. — Orpheus australis *Less.*

7. M. *calandria* (D'Orb. & Lafr.) Azara, No. 223. — Turdus saturninus *Licht.* Voy. dans l'Amér. Mér. Ois. t. 10. f. 2.; Orpheus modulator *Gould.*

8. M. *triurus* (Vieill.) N. Diet. d'Hist. Nat. xx. p. 276. — Orpheus tricaudatus *D'Orb. & Lafr.*

9. M. *trifasciatus* (Gould), Proc. Z. S. 1837. p. 27., Voy. of Beagle, Birds pl. 16.

10. M. *parvulus* (Gould), Proc. Z. S. 1837. p. 27., Voy. of Beagle, Birds pl. 18. — Orpheus melanotis *Gould*, Voy. of Beagle, Birds pl. 17.

11. M. *dorsalis* (D'Orb. & Lafr.) Av. Syn. p. 19., Voy. dans l'Amér. Mér. Ois. t. 11. f. 1.

12. M. *patagonicus* (D'Orb. & Lafr.) Av. Syn. p. 19., Voy. dans l'Amér. Mér. Ois. t. 11. f. 2.

13. M. *plumbeus* (Linn.) Pl. enl. 560. f. 1., Vieill. Ois. de l'Amér. Septr. t. 58. — Turdus ardosiacus *Vieill.*

14. M. *Thilius* (Mol.) Chili, p. 221.

15. M. *carolinensis* (Linn.) Cat. Car. pl. 66. — Turdus lividus *Wils.* Amer. Orn. pl. 20. f. 3.; Tr. felivox *Vieill.* Ois. de l'Amér. Septr. t. 67., Voy. l'Ile de Cuba, Ois. t. 7.

16 M. *cærulescens* (Swains.) Phil. Mag. 1827. p. 369. — Turdus melanotis *Temm.* Pl. col. 498.

17. M. *rufus* (Linn.) Pl. enl. 645., Wils. Amer. Orn. pl. 14. f. 1., Vieill. Ois. de l'Amér. Septr. pl. 59.

18. M. *longicaudatus* Tschudi, Fauna Peruana, p.

19. M. *curvirostris* (Swains.) Phil. Mag. 1827. p. 369. — Toxostoma velata *Wagl.*; Pomatorhinus turdinus *Temm.* Pl. col. 444.; Harpes rediviva *Gamb.* La Perouse Atl. to Voy. t. 37.; Type of Toxostoma *Wagl.* 1831.

20. M. *longirostris* (Lafr.) Rev. Zool. 1838. p. 55., Mag. de Zool. 1839. Ois. t. 1.

C.Hullmandel's Patent Lithotint.

POMATORHINUS
albicollis Horsf

The third Subfamily,

TIMALINÆ, or BABBLERS,

have the Bill moderate, with the culmen much curved, and the sides compressed to the tip, which is generally entire, or only slightly emarginated; the gonys long and ascending; the nostrils basal, and more or less exposed; the Wings short and much rounded; the Tail of various lengths, and graduated; the Tarsi lengthened, robust, and covered usually with an entire scale; the Toes long, strong, and strongly scutellated above; the claws more or less long, compressed, and acute.

DONACOBIUS *Swains.**

Bill long, and rather slender, with the culmen gradually curved, and the sides compressed to the tip, which is hooked and emarginated; the lateral margins slightly curved, and the gonys long and rather ascending; the nostrils basal, sunk in a broad groove, with the opening large and exposed. *Wings* very short and rounded; with the fourth, fifth, and sixth quills equal and longest. *Tail* rather long, and much rounded. *Tarsi* rather longer than the middle toe, robust, and covered with a slightly divided scale. *Toes* rather long and strong, with the lateral toes equal, and the outer united at its base; the hind toe very long and strong: the claws moderate, curved, and very acute.

It is in the warmer parts of South America that the species of this division are found, where they live, says Mr. Swainson, in pairs in the swamps that are overgrown with reeds, on the branches of which they cling, moving their body from one side to the other, at the same time expanding their tail, swelling out their throat, and incessantly uttering a series of discordant notes. Their flight is very slow and feeble. They form a pensile nest among the reeds.

1. D. *atricapillus* (Linn.) Wagl. Pall. Spic. vi. t. 2. f. 2., Pl. enl. 392.—Gracula longirostris *Pall.*; Turdus brasiliensis et Oriolus japacani *Gmel.*; Mimus brasiliensis *Pr. Neuw.*; T. pratensis *Vieill.* Azara, No. 219.; D. vociferans *Swains.* Zool. Ill. n. s. pl. 27.

2. D. *albolineatus* D'Orb. et Lafr. Voy. dans Amér. Mér. Ois. t. 12. f. 1.

* This division was originally established by Wagler in 1827, under the name of *Cichla*, which having been previously used, I have adopted that proposed by Mr. Swainson in 1831, as given above.

Cinclosoma *Vig. & Horsf.**

Bill moderate, rather slender, and straight, with the culmen sloping towards the tip, which is slightly curved and emarginated; the sides gradually compressed, and the gonys long and ascending; the gape furnished with a few very short bristles; the nostrils basal and linear, with the opening covered by a membranous scale. *Wings* short and rounded; with the third, fourth, and fifth quills nearly equal and longest. *Tail* lengthened, and much graduated. *Tarsi* rather longer than the middle toe, and robust, with the front covered with broad scales. *Toes* moderate, with the inner toe longer than the outer; the hind toe long, rather strong: the claws rather long, strong, and curved.

These birds are found in most parts of Australia, where they are generally seen, says Mr. Gould, on the summits of low stony hills and rocky gullies, particularly those covered with scrubs and grasses. They are usually observed on the ground, or on the fallen trunks of trees, searching for seeds and insects; and, if disturbed, they generally endeavour to escape by running among the underwood, but if closely pressed they take a short flight, which is performed by a series of undulations, and, having proceeded a sufficient distance, they suddenly alight on the ground again. The note of these birds consists of a low piping whistle. The nest is formed on the ground in a sheltered situation, and is composed of leaves and the inner bark of trees. The eggs are generally two in number; and the young soon possess the power of running with their parent.

1. C. *punctatum* (Lath.) Vig. & Horsf. Griff. An. Kingd. Birds, i. p. 529. pl., Gould, B. of Austr. pl.
2. C. *castanotum* Gould, Proc. Z. S. 1840. p. 113., B. of Austr. pl.
3. C. *cinnamomeum* Gould, Proc. Z. S. 1846. p. ., B. of Austr. pl.

Crateropus *Swains.*†

Bill moderate, and generally strong, with the culmen curved, and the sides compressed to the tip, which is slightly hooked and emarginated; the lateral margins curved, and the gonys curved upwards; the nostrils large, with the opening exposed, lunate, and covered by a membranous scale. *Wings* rather short, and much rounded; with the fourth quill nearly as long as the fifth and sixth, which are the longest. *Tail* rather long, and graduated. *Tarsi* rather longer than the middle toe, robust, and covered with broad scales. *Toes* long and strong, with the outer toe longer than the inner one; the hind toe very long and strong: the claws long, strong, and curved.

These birds frequent the marshy places of Africa, and are usually seen on the reeds and aquatic plants.

1. C. *bicolor* Jard. Edin. Journ. Nat. and Geogr. Sci. n. s. iii. pl. 3., Smith, Zool. S. Afr. Birds, pl.
2. C. *Reinwardtii* Swains. Zool. Illustr. n. s. pl. 80.
3. C. *squamatus* Rüpp. Zool. Atlas, t. 12.
4. C. *leucocephalus* Rüpp. Zool. Atlas, t. 4.
5. C. *plebejus* Rüpp. Zool. Atlas, t. 23.
6. C. *platycircus* Swains. B. of W. Afr. i. p. 274.
7. C. *atripennis* Swains. B. of W. Afr. i. p. 278.
8. C. *atriceps* (Less.) Tr. d'Orn. p. 646. — Crateropus oriolides *Swains.* B. of W. Afr. i. p. 280. pl. 31.
9. C. *leucopygius* Rüpp. Faun. Abyss. t. 30. f. 1.
10. C. *rubiginosus* Rüpp. Syst. Uebers. Vög. Nord-Ost Afr. t. 19.
11. C. *Swainsoni* Smith.
12. C. *Jardinii* Swains. Ill. Orn. pl.

* Established in 1825 by Vigors and Dr. Horsfield (*Linn. Trans.* xv. p. 219.).
† It was in 1831 that Mr. Swainson first established this genus (*Faun. Bor. Amer.* p. 487.).

Garrulax *Less.**

Bill moderate, with the culmen curved, and the sides compressed to the tip, which is entire; the lateral margins nearly straight, and the gonys long and ascending; the nostrils basal, and sunk in a short groove, with the opening placed in front, rounded, and hidden by the projecting plumes and bristles. *Wings* moderate and rounded, with the fifth and sixth quills equal and longest. *Tail* long, broad, and rounded. *Tarsi* longer than the middle toe, robust, and covered in front with very broad scales. *Toes* rather long and strong, with the outer toe longer than the inner, and united at its base; the hind toe very long and strong: the claws moderate, compressed, curved, and acute.

These birds inhabit the mountainous portions of India and China, where they live in jungles and shady ravines, and are usually observed in large flocks, making a noise closely resembling many persons laughing together. Their food consists of fruits and insects. The nest is formed in hollows, on the sides of the shady ravines and gullies, and is composed of small sticks and fine grasses. The eggs are usually four in number.

1. G. *perspicillatus* (Gmel.) Pl. enl. 604.
2. G. *shanhu* (Gmel.) Le Vaill. Hist. Nat. Rolliers, &c. t. 43. — Turdus melanopus *Gmel.*; Corvus auritus *Daud.* Sonn. Voy. t. 107.; Craterópus leucogenys *Blyth.*
3. G. *sinensis* (Linn.) Briss. Orn. ii. t. 23. f. 1. — Turdus canorus et Lanius faustus *Linn.* Edwards's Birds, pl. 184.
4. G. *leucocephalus* (Hardw.) Linn. Trans. Gould, Cent. of B. pl. 18.
5. G. *Belangeri* Less. Voy. dans Ind. Orient. t. 4. — Ianthocincla leucocephalus var. *Blyth.*
6. G. *ocellatus* (Vigors), Proc. Z. S. 1831. p. 55., Gould, Cent. of B. pl. 15.
7. G. *albogularis* Gould, Proc. Z. S. 1835. p. 187. — Cinclosoma albigula *Hodgs.* As. Res. xi. p. 146.
8. G. *pectoralis* Gould, Proc. Z. S. 1835. p. 186. — Cinclosoma grisauris *Hodgs.*
9. G. *melanotis* Blyth, Journ. A. S. B. 1843. p. 949.
10. G. *Mc Clellandii* Blyth, Journ. A. S. B. 1843. p. 949. — Ianthocincla pectoralis *Mc Clell. & Horsf.*
11. G. *moniliger* (Hodgs.) As. Res. xix. p. 147.
12. G. *rufifrons* Less. Voy. dans Ind. Orient. Ois. t. 5.
13. G. *cærulatus* (Hodgs.) As. Res. xix. p. 147.
14. G. *bicolor* (Müll.) Rev. Zool. 1844. p. 402.
15. G. *mitratus* (Müll.).
16. G. *ruficollis* (Jard. & Selby), Ill. Orn. n. s. pl. 21.
17. G. *lanaris* (Mc Clell. & Horsf.) Proc. Z. S. 1839. p. 160.

Trochalopteron *Hodgs.*†

Bill moderate, with the culmen much curved, and the sides compressed to the tip, which is strongly emarginated; the lateral margin slightly curved, and the gonys short and ascending; the gape furnished with a few long bristles; the nostrils lateral, basal, sunk in a groove, with the opening anterior, exposed, and rounded. *Wings* moderate and rounded, with the seventh and eighth quills the longest. *Tail* moderate, and much rounded on the sides. *Tarsi* much longer than the middle toe, and covered in front with very broad scales. *Toes* long, with the outer toe rather longer than the inner, and united at its base; the hind toe very long, and armed with a long strong claw.

These birds are found in the mountainous parts of India.

* Established by M. Lesson in 1831 (*Traité d'Ornithologie*, p. 647.). M. Laffresnaye has changed this word into *Garrularix* (1840). *Ianthocincla* of Mr. Gould (1835) is synonymous.

† Established by Mr. Hodgson in 1844 (*List of the Birds of Nepal*).

1. T. *squamatum* (Gould), Proc. Z. S. 1835. p. 48., Jard. & Selby, Orn. Ill. n. s. pl. 4. — Cinclosoma melanura *Hodgs.*
2. T. *phœniceum* (Gould). Icones Avium, pl. — Crateropus puniceus *Blyth.*
3. T. *rufigulare* (Gould), Proc. Z. S. 1835. p. 48. — Cinclosoma rufimenta *Hodgs.*
4. T. *subunicolor* Hodgs. Journ. A. S. B. 1843. p. 952.

Actinodura *Gould.**

Bill moderate, with the culmen curved, and the sides compressed to the tip, which is emarginated; the lateral margins slightly curved, and the gonys long and ascending; the nostrils basal and exposed, with the opening lunate, and protected by a membranous scale. *Wings* moderate and rounded, with the fifth and sixth quills the longest. *Tail* long, and much rounded on the sides. *Tarsi* longer than the middle toe, and covered in front by an entire scale. *Toes* moderate, with the outer one rather longer than the inner, and united at its base; the hind toe very long, strong, and armed with a strong claw.

It is in the mountainous portions of India that the species of this genus are found.

1. A. *Egertoni* Gould, Proc. Z. S. 1836. p. 18. — Leiocincla plumosa *Blyth*; Ixops rufifrons *Hodgs.* Fr. Zool. Typ. pl.
2. A. *nipalensis* (Hodgs.) As. Res. xix. p.

Pterocyclus.

Bill moderate and rather slender, with the culmen gradually curved, and the sides compressed to the tip, which is slightly emarginated; the lateral margins nearly straight, and the gonys moderate and ascending; the nostrils basal, with the opening large, lunate, and partly covered by a membranous scale. *Wings* moderate and rounded; with the first six quills graduated, and the sixth to the ninth the longest. *Tail* long, and rounded on the sides. *Tarsi* longer than the middle toe, strong, and covered in front with very broad scales. *Toes* long, the outer rather longer than the inner, and united at its base; the hind toe very long and strong, and armed with a long curved claw.

It is in the jungles of the mountainous parts of India that these birds reside. They live in small flocks, and are either seen clinging to the branches of the trees, or hopping about on the ground, searching for their food, which consists of various kinds of fruits and insects. The singular notes uttered by one of these birds have been compared by Mr. Jerdon to a sort of cracked Punch and Judy laugh, which is no sooner begun by one, than the others of the flock follow in chorus.

1. P. *erythrocephalus* (Vigors), Proc. Z. S. 1831. p. 171., Gould, Cent. of B. pl. 17.
2. P. *chrysopterus* (Gould), Proc. Z. S. 1835. p. 48.
3. P. *variegatus* (Vigors), Proc. Z. S. 1831. p. 56., Gould, Cent. of B. pl. 16. — Garrulax Abellei *Less.*
4. P. *lineatus* (Vigors), Proc. Z. S. 1831. p. 56.
5. P. *Feliciæ* (Less.) Rev. Zool. 1840. p. 164.
6. P. *Delesserti* (Jerd.). — Crateropus griseiceps *Deless.* Rev. Zool, 1840. p. 101.
7. P. *cachinnans* Jerd. Madr. Journ. Lit. and Sci. 1839. p. 255. pl. vii. — Crateropus Delessertii *Lafr.*; C. Lafresnayi *Deless.*
8. P. *setifer* (Hodgs.) As. Res. xix. p. 148.
9. P. *imbricatus* (Blyth), Journ. A. S. B. 1843. p. 951.
10. P. *rufifrons* (Swains.) Two Cent. and a Quart. p. 290.

* Established by Mr. Gould in 1836 (*Proc. Z. S.* 1836. p. 18.). *Leiocincla* of Mr. Blyth (1843) and *Ixops* of Mr. Hodgson (1844) are synonymous.

PELLORNEUM *Swains.**

Bill moderate and straight, with the culmen gradually curved, and the sides compressed to the tip, which is emarginated; the lateral margins nearly straight, and the gonys moderate and ascending; the nostrils basal, with the opening lunate, exposed, and partly closed by a membranous scale. *Wings* short and rounded, with the fifth and sixth quills the longest. *Tail* moderate, and much rounded. *Tarsi* longer than the middle toe, and the front with an almost entire scale. *Toes* moderate, with the outer rather longer than the inner, and united at its base; the hind toe long and strong: the claws small and slightly curved.

The species of this genus are found in the elevated parts of India. Mr. Jerdon remarks on one of the species, that it associates in small flocks among the low shrubs and thickets in lofty jungles, descending to the ground, where it hops about in search of various insects, and from thence running up and climbing the small branches, keeping a continual chattering, and every now and then one of them, perched on a low bough, elevating his head and neck, and giving utterance to a sort of a crowing laugh. On being disturbed, they retreat through the trees and underwood, at no great height from the ground.

1. P. *ruficeps* Swains. Faun. Bor. Amer. App. p. 487. — Cinclidia punctata *Gould.*

2. P. *olivaceum* Jerd. Madr. Journ. Lit. and Sci. 1839. p. 255.

TURNAGRA *Less.*†

Bill short, broad and elevated at the base, with the culmen curved, and the sides compressed to the tip, which is emarginated; the lateral margins much curved, and the gonys long and ascending; the nostrils basal, with the opening anterior, rather rounded, and slightly covered with a few bristles and plumes. *Wings* moderate and rounded, with the fifth and sixth quills equal and longest. *Tail* long, broad, and rounded. *Tarsi* longer than the middle toe, strong, and covered in front with broad scales. *Toes* long and strong, with the outer toe longer than the inner, and united at its base; the hind toe long, strong, and armed with a strong curved claw.

One of the species is found in New Zealand, and the other is from the mountainous portions of India. The former haunts low bushes, or is seen on the ground searching for seeds, which constitute its chief food. Its flight is only extended for a short distance at a time.

1. T. *crassirostris* (Lath.) — Loxia turdus *Forst.* Descr. Anim. p. 85., Icon. ined. 145.; Tanagra capensis *Sparrm.* Mus. Carls. t. 45.; T. macularia *Quoy & Gaim.* Voy. de l'Astrol. Ois. t. 7. f. 1.

2. T. ? *striata* (Vigors), Proc. Z. S. 1830. p. 7., Gould, Cent. of B. pl. 37.

* Mr. Swainson established this genus in 1831 (*Faun. Bor. Amer.* p. 487.). *Cinclidia* of Mr. Gould (1837) is synonymous.

† Established by M. Lesson in 1837 (*Compl. de Buffon*, viii. p. 216.). *Keropia*, which I proposed in 1840, is coequal.

Timalia.*

Bill more or less long, elevated and broad at the base, with the culmen much curved, and the sides considerably compressed to the tip, which is entire; the lateral margins curved, and the gonys long and ascending; the gape furnished with a few short bristles; the nostrils basal, sunk in a small groove, with the opening lunate, and protected by a bony scale. *Wings* moderate and rounded; with the fifth, sixth, and seventh quills equal and longest. *Tail* more or less lengthened, and rounded on the sides. *Tarsi* longer than the middle toe, strong, and covered in front with an almost entire scale. *Toes* long and strong, with the outer toe rather longer than the inner one; the hind toe very long, strong, and armed with a moderately strong claw.

These birds are found in small flocks in the open jungles, or in the cultivated grounds round the villages of India and Java. They are generally seen on the ground, which they search, especially around the trunks of large trees, for various kinds of seeds and insects. At the same time they utter a continual low chattering noise, which is occasionally changed to a loud guttural cry, but sometimes they are seen perched, pouring forth a remarkably sweet song. The nest is built in trees at no great distance from the ground, and it is composed of small twigs and roots most carelessly put together, wherein the female usually deposits four eggs.

1. T. *pileata* Horsf. Linn. Trans. xiii. p. 151., Zool. Res. Java, pl. . f. 1.
2. T. *thoracica* (Temm.) Swains. Pl. col. 76.
3. T. *nigricollis* Temm. Pl. col. 594. f. 2. — Brachypteryx nigrogularis *Eyton.*
4. T. *maculata* Temm. Pl. col. 593. f. 1. — Malacopteron squamatum *Eyton.*
5. T. *gularis* (Raffl.) Horsf. Linn. Trans. xiii. p. 312., Zool. Res. Java, pl. f. 2., Voy. au Pole Sud, Ois. t. 19. f. 2.; Type of Mixornis *Hodgs.* (1845).
6. T. *Horsfieldii* Jard. & Selby, Ill. Orn. pl. 119. — Parus sinensis *Gmel.* ?
7. ? T. *hypoleuca* Frankl. Proc. Z. S. 1831. p. 118. — Timalia bicolor *Lafres.* Mag. de Zool. 1835. Ois. t. 39.
8. T. *hyperythra* Frankl. Proc. Z. S. 1831. p. 118., Mag. de Zool. 1835. Ois. t. 40.
9. T. *grisea* (Gmel.) — Malacocircus striatus *Swains.* Zool. Illustr. n. s. pl. 127.; Type of Malacocircus *Swains.* (1832).
10. T. *caudata* (Cuv.) — Timalia chataræa *Frankl.* Proc. Z. S. 1831. p. 118.
11. T. *Malcolmi* Sykes, Proc. Z. S. 1832. p. 88. — Garrulus albifrons *Gray,* Ind. Zool. pl. 36. f. 1.
12. T. *Somervillei* Sykes, Proc. Z. S. 1832. p. 88.
13. T. *pellotis* Hodgs. As. Res. xix. p. 182.

Pomatorhinus *Horsf.*†

Bill more or less long, curved, and the sides much compressed to the tip, which is entire; the gonys very long and ascending; the nostrils basal, sunk in a small groove, with the opening lunate, and covered by a horny scale. *Wings* moderate and rounded, with the fifth and sixth quills equal and longest. *Tail* long, and much rounded. *Tarsi* of the length of the middle toe, with the front with an almost entire scale, sometimes with broad divided scales. *Toes* long and strong, with the inner toe rather shorter

* It was in 1820 that Dr. Horsfield established this genus (*Linn. Trans.* xiii. p. 150.). It embraces *Malacocircus* of Mr. Swainson (1832), and *Mixornis* of Mr. Hodgson (1845).

† Dr. Horsfield established this genus in 1820 (*Linn. Trans.* xiii. p. 164.). *Pomatorhynchus* of M. Boie (1826) is a synonyme. It contains *Xiphorhynchus* of Mr. Blyth (1842), since changed to *Xiphorhamphus* (1843).

than the outer; the hind toe very long, strong, and armed with a very long claw, which is compressed, curved, and acute.

India, Java, Australia, and New Guinea are the habitats of the species of this genus. They are found in the jungles and brushwood, and are usually observed on the ground in small flocks, searching for their food, which is composed of seeds and insects. If disturbed, they quickly perch on a low branch of a tree, among the branches of which they leap or climb with the greatest facility, uttering at the same time a shrill piping whistle, which is followed by a series of discordant chattering sounds. The Australian species, according to Mr. Gould, is capable of running up and down the branches of trees with rapidity, with the tail very much spread above the level of the back; and he further remarks that when a troop are engaged in ascending the branches, which they usually do in a line, they have a singular habit of suddenly assembling in a cluster, spreading their tails and wings, and puffing out their plumage until they resemble a complete ball of feathers. The nest is composed of dried sticks, having a dome of the same materials, which usually projects over the sides of the lower portion. The interior, which is entered on the side, is usually lined with soft portions of flowers, &c. The eggs are generally four in number.

1. P. *montanus* Horsf. Linn. Trans. xiii. p. 165., Zool. Res. Java, pl.
2. P. *erythrogenys* Vigors, Proc. Z. S. 1831. p. 173., Gould, Cent. of B. pl. 55.
3. P. *Horsfieldii* Sykes, Proc. Z. S. 1832. p. 89.
4. P. *ruficollis* Hodgs. As. Res. xix. p. 182.
5. P. *schisticeps* Hodgs. As. Res. xix. p. 181. — Pomatorhinus leucogaster *Gould*, Proc. Z. S. 1837. p. 137.
6. P. *albicollis* Horsf.
7. P. *superciliaris* (Bl.) Journ. A. S. B. 1842. p. 175., 1843. p. 947. pl.; Type of Xiphorhamphus *Blyth* (1843).
8. P. *frivolus* (Lath.) Lamb. Icon. ined. ii. 18.
9. P. *temporalis* Vig. & Horsf. Linn. Trans. xv. p. 330.
10. P. *trivirgatus* Temm. Pl. col. 443., Jard. & Selby, Ill. Orn. pl. 69.
11. P. *rubeculus* Gould, Proc. Z. S. 1839. p. 144.
12. P. *superciliosus* Vig. & Horsf. Linn. Trans. xv. p. 330.
13. P. *Geoffroyii* Less. Voy. de la Coqu. Ois. t. 29. f. 2.

Icteria *Vieill.**

Bill short, rather strong, curved and elevated and broad at the base, with the culmen and lateral margins curved, and the sides compressed to the tip, which is slightly emarginated; the gonys long and ascending; the nostrils basal, sunk in a small groove, with the opening rounded and exposed. *Wings* moderate, with the third and fourth quills equal and longest. *Tail* moderate and rounded. *Tarsi* much lengthened, strong, and covered in front with an almost entire scale. *Toes* moderate, with the outer toe rather longer than the inner, and united at its base; the hind toe moderate: the claws long, curved, and acute.

The species of this genus are found in North and Central America. They are generally seen in the thick bushes, especially those that border the rivers. As their food consists of insects and berries, it causes them to migrate from place to place in search of a supply for their subsistence. The nest is formed in a thick bush, and is composed of dry leaves and strips of the bark of grape vines; the interior is lined with fibrous roots and fine dry grass. The eggs are four in number.

1. I. *viridis* (Gmel.) Pr. Bonap. Wils. Amer. Orn. pl. 6. f. 2. — Icteria dumicola *Vieill.*; Pipra polyglotta *Wils.* Audub. B. of Amer. pl. 137.
2. I. *Velasquezi* Pr. Bonap. Proc. Z. S. 1837. p. 117.

* Established by Vieillot in 1807 (*Oiseaux d'Amér. Septr.* i. p. 85.)

ORIOLUS
acrorhynchus Vig.

1. SERICULUS melinus. 2. ORIOLUS acrorhynchus. 3. SPHECOTHERES australis. 4. ORIOLIA Bernieri.

The fourth Subfamily,

ORIOLINÆ, or ORIOLES,

have the Bill as long as the head, broad at the base, and compressed on the sides, with the culmen more or less elevated at the base and curved to the tip, which is emarginated; the nostrils lateral, basal, exposed, and partly closed by a membrane; the Wings long, with the first three quills equally graduated, and the third and fourth the longest; the Tarsi short, and strongly scaled; the Toes moderate, and the lateral toes usually unequal.

SPHECOTHERES *Vieill.**

Bill short, broad at the base, with the culmen curved to the tip, which is emarginated; the sides compressed, and the lateral margins nearly straight; the nostrils basal, lateral, with the opening partly closed by a membrane. *Wings* long, with the third and fourth quills equal and longest. *Tail* rather long and even. *Tarsi* as long as the middle toe, and strongly scaled. *Toes* moderate, the lateral ones equal; the hind toe long and strong; the claws short and much curved.

The birds that compose this genus are found in Australia and the Island of Timor. They frequent the topmost branches of the lofty trees, feeding chiefly on fruits of various kinds, and occasionally on insects.

1. S. *maxillaris* (Lath.) Lamb. Icon. ined. ii. 25. — Sphecotheres viridis *Vig. & Horsf.*; S. Vieillotii *Vigors*; S. canicollis *Swains.* Jard. & Selby, Ill. Orn. pl. 79.; S. australis *Swains.*

2. S. *viridis* Vieill. Analyse, &c. p. 68., Gal. des Ois. t. 147., Voy. de l'Uranie, Ois. t. 21. — S. virescens *Vieill.*

3. ? S. *grisea* Less. Tr. d'Orn. p. 351. — Lanius asturinus *Mus. Par.*

ORIOLUS *Linn.*†

Bill the length of the head, broad at the base, with the culmen slightly depressed and curved to the tip, which is emarginated; the sides compressed, and the lateral margins straight; the nostrils basal, lateral, ovoid, exposed, and the opening partly closed by a membrane. *Wings* long, with the first quill

* Established by Vieillot in 1816 (*Analyse*, p. 42.); in 1825 he used *Sphecothera.*

† Linnæus established his genus in 1766 (*Systema Naturæ*). Mœhring had previously proposed the name of *Turdus* in 1752; while, in 1777, Scopoli proposed that of *Galbula* for the same birds. It includes *Mimeta* of Vigors and Dr. Horsfield (1826), *Analcipus* of Mr. Swainson (1831), with which, *Artamia* of M. I. Geoffroy (1832), *Philocarpus* of M. Müller (1835), *Psaropholus* of Sir W. Jardine and Mr. Selby (1839), and *Erythrolanius* of M. Lesson, (1840), are synonymous.

half the length of the third and fourth, which are equal and longest. *Tail* moderate and rounded. *Tarsi* short, nearly the length of the middle toe, and covered in front with broad scales. *Toes* moderate, free at their base, and the outer toe longer than the inner; the hind toe long and strong; the claws long, strong, and curved.

These migratory birds are scattered in various parts of the Old World. They are usually found solitary or in pairs, and occasionally in small flocks, frequenting the skirts of forests, gardens, and orchards, feeding on the various kinds of fruits and insects. Their flight is undulating, when flying from one lofty tree to another to search the foliage for the caterpillars which may be feeding on them. They emit a loud, mellow, plaintive cry. The nest is rather flat and saucer-shaped, and generally placed in a fork of the boughs of a tree, to both branches of which it is firmly attached. It is made of sheep's wool and long slender stems of grass. The nest of some species is elongated, purse-shaped, and pendulous, hanging from high branches of trees. The eggs are usually four or five in number.

1. Or. *galbula* Linn. Pl. enl. 26. — Coracias oriolus *Scop.*

2. Or. *kundoo* Sykes, Proc. Z. S. 1832. p. 87. — Oriolus aureus *Jerd.*

3. Or. *auratus* Vieill. Le Vaill. Ois. d'Afr. t. 260. — Oriolus bicolor *Temm.*; O. flavus *Gmel.?* Swains. B. of W. Afr. ii. pl. 1.

4. Or. *chinensis* Linn. Pl. enl. 570. — Oriolus maculatus *Vieill.*; Or. Hippocetis *Wagl.*

5. Or. *acrorhynchus* Vigors, Proc. Z. S. 1831. p. 97.

6. Or. *coronatus* Swains. Two Cent. and Quart. p. 342.

7. Or. *melanocephalus* Linn. Pl. enl. 79., Edw. Birds, pl. 77., Le Vaill. Ois. d'Afr. t. 263. — Oriolus maderaspatanus *Frankl.* Edw. Birds, pl. 186.

8. Or. *Hodgsonii* Swains. Two Cent. and Quart. p. 290. — Oriolus Mc Coshii *Tick.*

9. Or. *philippensis* Gray, Zool. Misc. p. 3.

10. Or. *monachus* (Gmel.) — Oriolus moloxita *Rupp.* Faun. t. 12. f. 1.

11. Or. *brachyrhynchus* Swains. B. of W. Afr. ii. p. 35.

12. Or. *larvatus* Licht. Cat. Dupl. Berl. Mus. p. 20., Le Vaill. Ois. d'Afr. t. 261, 262. — Oriolus radiatus *Gmel.?*; Or. condougnan *Temm.*; Or. capensis *Swains.*; Or. monachus *Wagl.*; Or. chloris *Cuv.*

13. Or. *arundinarius* Burch. Trav. S. Afr. i. p. 464. 501.

14. Or. *xanthonotus* Horsf. Linn. Trans. xiii. p. 152., Zool. Res. in Java. pl. . — Oriolus leucogaster *Temm.* Pl. col. 214.

15. Or. *castanopterus* Bl. Journ. As. Soc. *Beng.* 1842. p. 796.

16. Or. *Traillii* (Vigors), Hodgs. Gould, Cent. of B. pl. . Jard. & Selby, Ill. Orn. n. s. pl. 26.; Type of Psaropholus *Jard. & Selby* (1839).

17. Or. *sanguinolentus* (Temm.) Pl. col. 499. — Leptopteryx cruenta *Wagl.*; Erythrolanius rubropectus *Less.*; Type of Analcipus *Swains.* (1831).

? 18. Or. *hirundinaceus* Swains. Two Cent. and Quart. p. 284.

19. Or. *viridis* (Lath.) Lamb. Icon. ined. i. 54. — Coracias sagittata *Lath.* Lamb. Icon. ined. ii. 15., Jard. & Selby, Ill. Orn. pl. 61.; Oriolus variegatus *Vieill.*; Type of Mimeta *Vigors & Horsf.* (1826).

20. Or. *flavocinctus* (Vigors), King's Surv. Austr. ii. 419.

21. Or. *meruloides* (Vigors & Horsf.) Linn. Trans. xv. 327.

22. Or. *virescens* Temm.

23. Or. *striatus* Quoy & Gaim. Voy. de l'Astrol. Ois. t. 9. f. 2.

24. Or. *aureus* (Gmel.) Edwards's Birds, pl. 112. — Paradisea aurantiaca *Shaw.*

Sericulus *Swains.**

Bill long, rather slender, with the culmen at the base keeled and slightly curved to the tip, which is emarginated, and the sides compressed; the nostrils basal, lateral. *Wings* moderate, with the first two quills equally graduated, and the third and fourth equal and longest. *Tail* moderate and even. *Tarsi* much longer than the middle toe, and broadly scutellated. *Toes* moderate, the inner toe shorter than the outer, which is united at the base; the claws moderate, much curved, and acute.

These birds are peculiar to Australia, where they are usually found in the large bushes, and their food principally consists of the fruits of various New Holland fig trees.

* Established by Mr. Swainson in 1825 (*Zoological Journal*, i. 476.).

1. S. *mellinus* (Lath.) Lamb. Icon. ined. ii. 77. — Meliphaga chrysocephala *Lewin*, B. of New Holl. pl. 1.; Oriolus regens *Quoy et Gaim.* Voy. de l'Uranie, Ois. t. 22., Pl. col. 320., Less. Ois. Par. t. 26, 27., Voy. de la Coqu. Ois. t. 20.

2. S. *magnirostris* Gould, Proc. Z. S. 1837. p. 145.

Oriolia *I. Geoffr.**

Bill nearly as long as the head, with the culmen straight, except at the tip, which is slightly bent and emarginated; the gape as broad as high, and the sides compressed towards the tip; the nostrils small, placed near the base, and at an equal distance from the culmen and the lateral margin. *Wings* rather long, reaching to the middle of the tail, and rounded. *Tail* long, the lateral feathers rather shorter than the intermediate ones, and each one ending in a point. *Tarsi* short, and covered with broad scales. *Toes* long, and armed with compressed, curved, and acute claws.

The type of this genus is found in Madagascar.

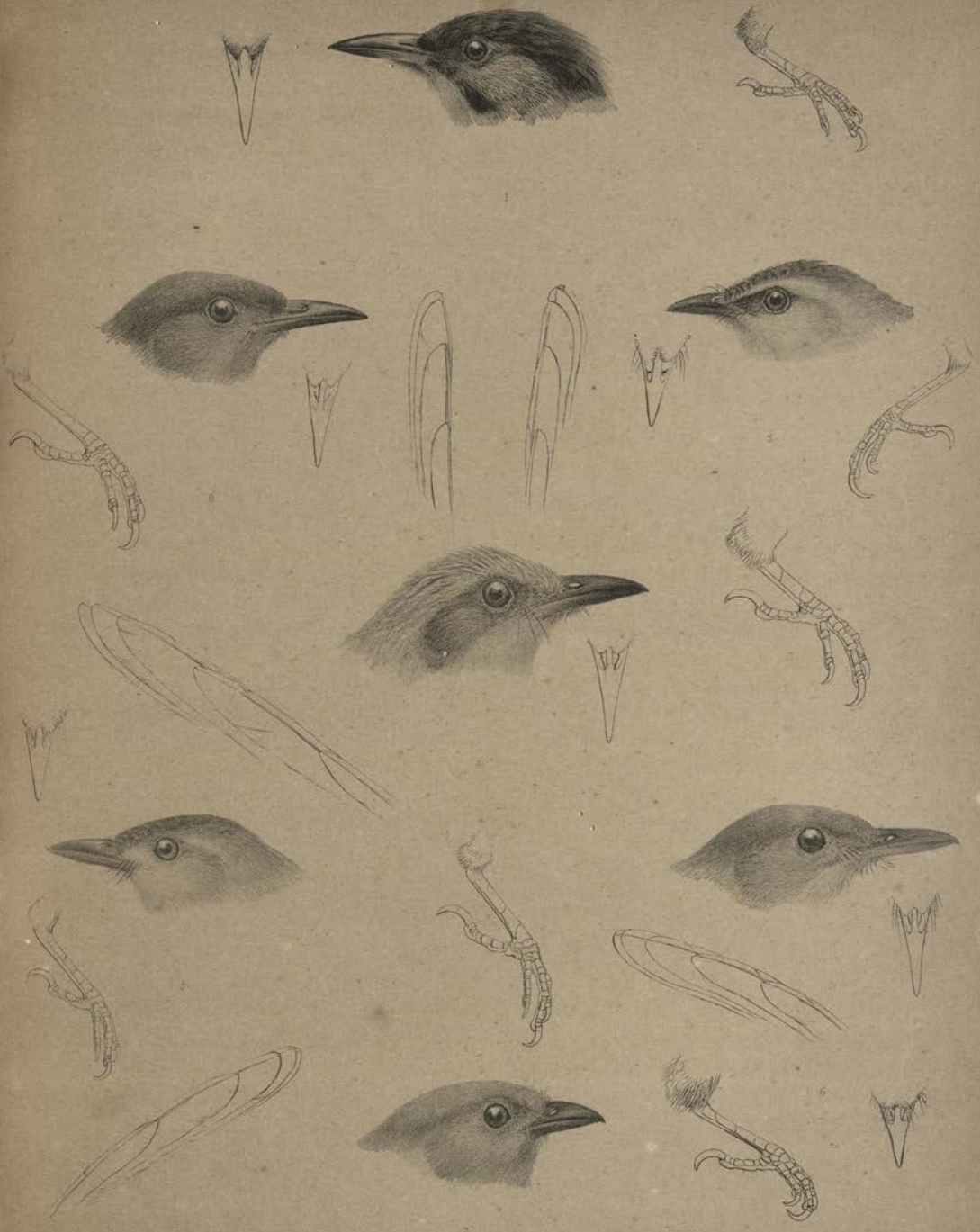
O. *Bernieri* I. Geoffr. Mag. de Zool. 1839. Ois. t. 4.

* Established by M. Isidore Geoffroy in 1839 (*Mag. de Zool.* 1839. Ois. t. 4.).

December, 1845.

Hullmandel & Walton's new Process

PYCNONOTUS
flavula Hodg



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1. HYPSIPETES parvoides. 2. SIBIA picaoides. 3. PYCNONOTUS goiavier. 4. MICROSCELIS amaurotis. 5. CRINIGER caniceps.
6. PHYLLASTREPHUS capensis. 7. ANDROPADUS importunus.

The fifth Subfamily,

PYCNONOTINÆ, or BULBULS,

have the Bill usually short, with the culmen curved, and the sides compressed to the tip, which is emarginated; the gape furnished with more or less lengthened bristles; the Nostrils basal, and placed in a short membranous groove: the Wings moderate and rounded: the Tail long, broad, and generally rounded at the end: the Tarsi as long as, or shorter than, the middle toe, and generally covered by an entire scale: the Toes moderate; the outer toe sometimes longer than the inner, and united at the base; the hind toe long and strong.

MICROSCELIS.*

Bill long, nearly straight, and slightly depressed at the base, with the culmen curved, and the sides compressed to the tip, which is slightly emarginated; the gonys long and slightly ascending; the gape furnished with a few bristles; the nostrils basal, and placed in a membranous groove, with the opening oval and exposed. *Wings* moderate and rounded, with the fifth and sixth quills equal and longest. *Tail* moderate and broad, with the end even or rounded. *Tarsi* as long as the middle toe, and covered with an entire scale. *Toes* rather short, the lateral toes unequal, the hind toe long and short; the claws moderate, curved, and acute.

The species of this genus are found in India and its archipelago.

1. M. *amaurotis* (Temm.) Pl. col. 497.
2. M. *melanoleucus* Gray, Zool. Misc. p. 1.
3. M. ——— ? — Microtarsus melanoleucus *Eyton*, Proc. Z. S. 1839. p. 102.
4. M. *squamiceps* (Kittl.) Mém. de l'Acad. St. Petersb. 1835. t. 16., Kittl. Kupf. Vög. t. 12. f. 1.
5. M. *ochrocephalus* (Gmel.) Brown, Ill. Zool. pl. 22. — Sturnus zeylanicus *Gmel.* Pl. col. 136.
6. M. ? *virescens* Temm. Pl. col. t. 382. f. 1.
7. M. *philippensis* (Gmel.) Kittl. Kupf. Vög. t. 12. f. 2.

CRINIGER *Temm.*†

Bill short, strong, broad, and elevated at the base, with the culmen curved, and the sides compressed to the tip, which is emarginated; the gonys short, and slightly ascending; the gape furnished with very long bristles; the nostrils basal, and placed in a short broad groove, with the opening oval and

* Originally established under the name of *Micropus*, by Mr. Swainson, in 1831; which, having been previously employed, was changed by me to the above name. It embraces *Microtarsus* of Mr. Eyton (1839).

† Established by M. Temminck (1820), he afterwards changed this name to *Trichophorus*. It embraces *Iole* of Mr. Blyth (1844).

exposed; the nape is furnished with long slender hairs. *Wings* moderate and rounded, with the fourth quill nearly as long as the fifth and sixth, which are equal and longest. *Tail* rather long, and broad. *Tarsi* shorter than the middle toe, and covered in front with an entire scale. *Toes* moderate; the lateral toes unequal, the outer one slightly united at the base; the hind toe long, strong, and armed with a prominent claw.

It is in the woody districts of Africa and Asia that the species of this genus are found. They are generally noticed actively flying from bush to bush, examining the branches in search of their subsistence, which chiefly consists of various kinds of fruits and berries, and occasionally of insects. If alarmed, they usually hide themselves in the thickest parts of the bush, where they remain perfectly inactive until their fears have subsided. Some species possess a series of loud clear thrush-like notes.

1. C. *barbatus* Temm. Pl. col. 88. — Trichophorus strigilatus *Swains.*
2. C. *gularis* (Horsf.) Linn. Trans. xiii. p. 150.
3. C. *caniceps* (Lafr.) Rev. Zool. 1845. p. 367. — Ixos phæocephalus *Hartl.*; Pycnonotus rufocaudatus *Eyton.*
4. C. *flaveolus* (Gould), Proc. Z. S. 1846. p. 6. — Trichophorus xanthogaster *Hodgs.*
5. C.? *ictericus* Strickl. Ann. Nat. Hist. 1844. 411. — Turdus indicus *Gmel.*?
6. C. *crispiceps* (Blyth), Journ. A. S. B. 1842. p. 204.
7. C. *flaviventris* (Smith), Ill. A. Z. Birds, pl. 59.
8. C. *olivaceus* (Swains.) B. of W. Afr. i. p. 264.
9. C. *tephrogenys* (Jard. & Selby), Ill. Orn. pl. 127. — Trichophorus gularis *Swains.*?
10. C. ——— ? — Iole olivacea *Blyth*, Journ. A. S. B. 1844. p. 386.; Type of Iole *Blyth* (1844).
11. C. *affinis* (Homb. & Jacq.) Voy. au Sud Pole, Ois. t. 15. f. 1.

Andropadus *Swains.**

The characters are very similar to those of the foregoing genus, except that the tip of the *Bill* is furnished with three or four emarginations on each side; the *Tarsi* are covered in front with broad transverse scales.

The species of this division are peculiar to the continent of Africa; where they live in small flocks on the tops of the trees, actively employed in search of their food, which consists of fruits and berries, and uttering at the same time an incessant irksome cry. The nest is formed on the branches of large trees. The female usually lays from four to five eggs.

1. A. *importunus* (Vieill.) Ency. Méth. p. 662. Levaill. Ois. d' Afr. t. 106. f. 2. — Turdus clamosus *Steph.*; Andropadus vociferus et A. familiaris *Swains.*; T. brachypodioides *Jard.* Mag. de Zool. 1832. Ois. t. 4.
2. A. *latirostris* Strickl. Ann. Nat. Hist. xv. p. 127.
3. A. *gracilirostris* Strickl. Ann. Nat. Hist. xv. p. 127.

Pycnonotus *Kuhl.*†

Bill more or less short, and broad at the base; with the culmen curved, and the sides compressed to the tip, which is emarginated; the gonys short and ascending; the gape furnished with a few short weak bristles; the nostrils basal and placed in a groove, with the opening oval and exposed. *Wings* moderate and rounded, with the fourth, fifth, and sixth quills nearly equal and longest. *Tail* moderate

* Mr. Swainson established this genus in 1831 (*Faun. Boreali-Amer.* p. 485.). *Polyodon* (1832) of Baron de Lafresnaye is synonymous.

† Established by Kuhl in 1826 (*Isis*, 1826, p. 975.). *Brachypus* of Mr. Swainson (1824), *Turdoides* or *Ixos* of M. Temminck (182?), and *Alcurus* of Mr. Hodgson (1844) are synonymous. It embraces *Hæmatornis* of Mr. Swainson (1831), *Hemipus* (1845), and *Ixidia* (1846) of Mr. Hodgson.

and rather rounded. *Tarsi* as long as the middle toe, and rather strong, with the front covered by an undivided scale. *Toes* moderate; the lateral toes nearly equal; the hind toe rather long, strong, and armed with a long curved claw.

The species are found in the southern parts of Europe, also in Africa, Asia, and its archipelago. They frequent the trees in open places, in pairs or in small parties; and are usually observed actively hopping from branch to branch, while in search of fruits, berries, and insects, which constitute their food. They sometimes commit great depredations in gardens, flying from tree to tree in a direct line, with a quick flapping of the wings, usually uttering at the same time a whistling note. They have also the power of imitating the cries of various other birds.

1. P. *dispar* (Horsf.) Linn. Trans. xiii. p. 150., Pl. col. 137.
2. P. *gularis* Gould, Proc. Z. S. 1835. p. 186.
3. P. *rubineus* Jerd. Madr. Journ. Lit. and Sci. 1839. p. 246.
4. P. *flavirictus* Strickl. Ann. Nat. Hist. 1844. p. 413.
5. P. *xanthokæmus* Jerd. Madr. Journ. 1844. p. 122.
6. P. *Finlaysoni* Strickl. Ann. Nat. Hist. 1844. p. 411.
7. P. *leucogenys* (Gray), Ill. Ind. Zool. pl. 35. f. 3. — Ixos plumigerus *Lafr.*; Hæmatornis cristatus *Burn.*
8. P. *leucotis* Gould, Proc. Z. S. 1836. p. 6.
9. P. *plumiferus* Gould, Proc. Z. S. 1837. p. 137.
10. P. *striatus* (Blyth), Journ. A. S. B. 1842. p. 184. — Alcopus (Sibia) nipalensis *Hodgs.*
11. P. *cuptilotus* (Jard. & Selby), Ill. Orn. pl. 3.
12. P. *priocephalus* (Jerd.) Madr. Journ. Lit. and Sci. 1833. p. 246.
13. P. *flaviventris* (Tick.) — Brachypus melanocephalus *Gray*, Ill. Ind. Orn. pl. 35. f. 1.; Type of Alcurus *Hodgs.* (1844).
14. P. *melanocephalus* (Gmel.) Lath. Gen. Syn. pl. 6. — Turdoides atriceps *Temm.* Pl. col.
15. P. *metallicus* (Eyton), Ann. Nat. Hist. 1845. 228.
16. P. *cyaniventris* Blyth, Journ. A. S. B. 1842. p. 792. — Malacopteron aureum *Eyton*; Type of Ixidia *Blyth* (1846).
17. P. *squamatus* (Temm.) Pl. col. 453. f. 2.
18. P. *inornatus* (Fras.) Proc. Z. S. 1843. p. 27.
19. P. *leucogrammicus* (Müll.) Tydsch. 1835. p. 352.
20. P. *tympanistrigus* (Müll.) Tydsch. 1835. p. 353.
21. P. *Fisquetii* (Eyd. & Souley), Voy. de la Bonite, Ois. t. 5.
22. P. *Yourdini* (Homb. & Jacq.) Voy. au Pole Sud, Ois. t. 14. f. 1.
23. P. *simplex* Less. Rev. Zool. 1839. p. 167.
24. P. *flavulus* (Hodgs.) App. Cat. of Mam. and Birds, 154. — Type of Hemipus *Hodgs.* (1845).
25. P. *auriguster* (Vieill.) Levaill. Ois. d'Afr. t. 107. f. 2. — Turdus chrysorrhœus *Temm.*; Type of Hæmatornis *Swains.* (1831).
26. P. *nigricans* (Vieill.) — Turdus capensis var. *Lath.* Pl. enl. 317., Levaill. Ois. d'Afr. t. 106. f. 1.; Turdus Levaillantii *Temm.*; Ixos xanthopygius *Ehrenb.*
27. P. *capensis* (Gmel.) Briss. Orn. t. 27. f. 3., Levaill. Ois. d'Afr. t. 105.
28. P. *goiavier* (Scop.) Strickl. Sonn. Voy. t. 28. — Muscicapa psidii *Gmel.*; Turdus analis *Horsf.*
29. P. *cafer* (Linn.) Pl. enl. 563. f. 1., Levaill. Ois. d'Afr. t. 107. f. 1.
30. P. *pusillus* (Blyth), Journ. As. Soc. Beng. 1841. p. 841.
31. P. *hæmorrhous* (Gmel.) Brown, Ill. pl. 31. f. 1.
32. P. *crocorrhous* Strickl. — Muscicapa hæmorrhoa var. *Gmel.*; Turdus hæmorrhous *Horsf.* Brown, Ill. t. 31. f. 2.; Hæmatornis chrysorrhoides *Lafr.*
33. P. *jocosus* (Linn.) Pl. enl. 508.?, Dixon's Voy. pl. ii. p 360., Shaw, Nat. Misc. pl. 645., Sonn. Voy. t. 109. — Sitta chinensis *Osb.*
34. P. *bimaculatus* (Horsf.) Swains. Less. Cent. de Zool. t. 75.
35. P. *monticola* (Mc Clell.) Proc. Z. S. 1839. p. 160.
36. P. *luteolus* (Less.) Rev. Zool. 1840. p. 354.
37. P. *arsinoe* (Licht.) Cat. Dupl. Berl. Mus. p. 39.
38. P. *obscurus* Temm. Man. d'Orn. iv. p. 608. — Hæmatornis lugubris *Less.*
39. P. *flavicollis* (Swains.) B. of W. Afr. i. p. 259.
40. P. *occipitalis* (Temm.) Mag. de Zool. 1836., Ois. t. 66.

*Hypsipetes *Vigors.*†

Bill long and rather weak, with the culmen slightly curved, and the sides compressed to the tip, which is slightly emarginated; the nostrils basal and placed in a membranous groove, with the opening oval and exposed. *Wings* rather long, and rounded, with the fourth and fifth quills equal and longest. *Tail* long and broad, with the end forked. *Tarsi* rather shorter than the middle toe, and covered in front with an entire scale. *Toes* moderate; the lateral toes equal, and the outer one slightly united at the base; the hind toe short, strong, and armed with a short compressed claw.

* Established by Vigors in 1831 (*Proc. Z. S.* 1831. p. 43.).

These species are inhabitants of the dense jungles of India and its Archipelago. They live in small flocks on the tops of the trees, seeking the fruits and berries that are found on them. They often pour forth their lively and agreeable warbling, which is sometimes continued while proceeding from tree to tree, in an undulating and not very rapid flight.

1. H. *psaroides* Vigors, Proc. Z. S. 1831. p. 43., Gould, Cent. Ind. B. pl. 10.
2. H. *neilgherriensis* Jerd. Journ. A. S. B. 1839. p. 293.
3. H. *ganeesa* Sykes, Proc. Z. S. 1832. p. 87.
4. H. *olivacea* Jard. & Selby, Ill. Orn. n. s. pl. 2.
5. H. *Mc Clellandii* Horsf. Proc. Z. S. 1839. p. 159. — Hypsipetes viridis *Hodgs.*
6. H. *philippensis* Strickl. Ann. Nat. Hist. 1844. p. 413.
7. H. *malaccensis* Blyth, Journ. A. S. B. 1846. p. 51.

Sibia *Hodgs.**

The characters like those of the preceding genus, except that the nostrils are basal, and placed in a groove, with a large membranous scale, leaving a lunate opening. *Tail* more or less lengthened, rounded or graduated. *Tarsi* much longer than the middle toe, moderately strong, and covered in front by an entire scale. *Toes* long; the lateral toes nearly equal, the outer one united at the base; the hind toe long, strong, and armed with a prominent claw.

1. S. *picaoides* Hodgs. Journ. As. Soc. Beng. 1839. p. 38. — Heterophasia cuculoides *Blyth.*
2. S. *capistrata* (Vigors), Proc. Z. S. 1831. p. 56. — Sibia nigriceps *Hodgs.*
3. S. *gracilis* Mc Clell. Proc. Z. S. 1839. p. 159.

Phyllastrephus *Swains.*†

Bill long, and rather slender, with the culmen slightly curved, and the sides compressed to the tip, which is strongly emarginated; the gonys long and slightly ascending; the gape furnished with a few short bristles; the nostrils basal, and placed in a small groove, with the opening rounded and exposed. *Wings* moderate and rounded, with the fifth, sixth, and seventh quills equal and longest. *Tail* long, rather broad, and rounded on the sides. *Tarsi* rather longer than the middle toe, and covered in front with broad scales. *Toes* moderate; the lateral toes unequal, the outer one longest, and united at its base; the hind toe longer than the inner, strong, and armed with a strong curved claw.

These birds are peculiar to Africa, and are usually seen in small parties actively engaged on the ground among the dead leaves that lie under brushwood and thickets, turning them over with their bill and feet with great dexterity, while in search of worms and small insects, that conceal themselves in such places.

1. P. *capensis* Swains. Levaill. Ois. d'Afr. t. 112. f. 1. — Phyllastrephus terrestris *Swains.*
2. P. *scandens* Swains. Birds of W. Afr. i. p. pl. 30.
3. P. *lugubris* (Bodd.) Pl. enl. 563. f. 2. — Turdus senegalensis *Gmel.*

* Established by Mr. Hodgson in 1837. In 1841 Mr. Hodgson changed this name to *Alcopus*. *Heterophasia* of Mr. Blyth (1842) is synonymous.

† Established by Mr. Swainson in 1831 (*Fauna Boreali-Americana*, p. 486.).

FLOOLMSON TESTIMON

Hullmandel & Walton, Lithographers.

LIPANGUS
lateralis. G.R.Gray.

The third Family,

MUSCICAPIDÆ, or FLY-CATCHERS,

have the Bill of various lengths, generally broad and depressed at the base, with the culmen more or less curved, and the sides compressed to the tip, which is emarginated; the gape usually furnished with long and strong bristles: the Wings generally long: the Tail more or less long: the Tarsi mostly short and weak: the Toes more or less long, and the outer toe generally united at the base.

The first Subfamily,

QUERULINÆ, or MOURNERS,

have the Bill rather long, slightly depressed, and broad at the base, with the culmen gradually curved and the sides compressed to the tip, which is emarginated; the gape furnished with short bristles; the Nostrils oval, and more or less covered by the frontal plumes: the Wings more or less long, with the third and fourth quills the longest: the Tail long and broad: the Tarsi short: the Toes rather short, the outer toe the longest, and united at the base; the Claws long, much curved, and acute.

QUERULA *Vieill.**

Bill rather long, very broad at the base, and slightly depressed, with the culmen slightly curved, and the sides compressed to the tip, which is emarginated; the gonys long and ascending; the nostrils basal, oval, and covered by the projecting plumes and short bristles. *Wings* very long and rounded, with the third and fourth quills equal and longest. *Tail* long, broad, and rounded. *Tarsi* as long as the middle toe, and covered in front with transverse scales. *Toes* short; the outer toe longer than the inner one, and slightly united at its base; the hind toe long and strong; the claws long, compressed, much curved, and acute.

These birds are found in the large forests of Tropical America, where they are usually observed in flocks, actively engaged in seeking insects and fruits on the lofty trees. The nest is placed on the highest parts of the trees, and is stated to be of large size. The female is said to deposit four eggs.

1. Q. *cruenta* (Bodd.) Pl. enl. 381. — Muscicapa rubricollis *Gmel.* Levaill. Ois. Am. et Ind. t. 47. 48.; Musc. porphyrobroncha *Shaw*, Nat. Misc. pl. 60., Gal. des Ois. t. 115.

2. Q. *militaris* (Gmel.) Levaill. Ois. Am. et Ind. t. 25, 26. — Querula rubra *Vieill.*; Q. purpurea *Less.*

* Vieillot established this name in 1816 (*Analyse, &c.* p. 37.).

Lipangus.*

Bill moderate, broad at the base, and rather depressed, with the culmen curved, and the sides compressed to the tip, which is emarginated; the gonys moderate and ascending; the nostrils lateral, with the opening oval and partly covered by the frontal plumes and short bristles. *Wings* moderate, and rather rounded; with the third and fourth quills equal and longest. *Tail* long, broad, and slightly rounded. *Tarsi* as long as the middle toe, strong, and covered in front with broad scales. *Toes* short; the outer toe longer than the inner, and slightly united at the base; the hind toe long and strong; the claws moderate, compressed, curved, and acute.

It is in the tropical parts of South America that the species of this genus are found.

1. L. *plumbeus* (Licht.) Cat. Dupl. Berl. Mus. p. 53., Levaill. Ois. d'Amér. t. 44. — Ampelis cinerea *Vieill.*; Lathria cinerea *Swains.* Nat. Libr. Flyc. pl. 2.
2. L. *simplex* (Licht.) Cat. Dupl. Berl. Mus. p. 53.
3. L. *fuscocinereus* (Lafr.) Rev. Zool. 1848. p. 292.
4. L. *hypopyrrhus* (Vieill.) Encyc. Méth. p. 762. — Muscicapa sibilatrix *Pr. Max.*; Lipangus lateralis *G. R. Gray*, plate lx.
5. ? L. *sanguinarius* (Less.) Rev. Zool. 1840. p. 353. — Type of Laniocera *Less.* (1840).
5. L. *lanioïdes* (Less.) Echo, 1844. p. 156. — Type of Turdampelis *Less.* (1844).

* Established by M. Boie in 1821 (*Isis*). *Lathria* of Mr. Swainson (1831), *Laniocera* (1840), and *Turdampelis* (1844) of M. Lesson are coequal with the name employed.

February, 1847.

Hullmandel & Walton's new Process

FLUVICOLA
cyanirostris. Vieill.

Wolf del et lith. Printed by Hullmandel & Walton.

1. TESIOPTERA nengeta. 2. ARUNDINICOLA leucocephala. 3. FLUVICOLA climacura. 4. GUBERNATES yetapa.
5. ALECTRURUS tricolor. 6. COPURUS filicaudus. 7. LICHENOPS perspicillata.

The second Subfamily,

ALECTRURINÆ, or ALECTRURES,

have the Bill of various lengths, broad at the base, and rather depressed, with the culmen sloping and rounded; the sides gradually compressed to the tip, which is emarginated; the gonys long and slightly ascending; the Nostrils basal, rounded, and exposed: the Wings more or less long: the Tail of various lengths and forms: the Tarsi more or less long, and slender: the Toes usually moderate, and armed with long, acute, curved claws.

TÆNIOPTERA *Pr. Bonap.**

Bill rather short, slightly depressed, and broad at the base, with the culmen straight towards the tip, which is suddenly curved and emarginated; the sides compressed, and the gape furnished with short weak bristles; the gonys long and slightly ascending; the nostrils lateral, and placed in a short membranous groove, with the opening rounded and exposed. *Wings* long and pointed; with the first two quills sometimes as long as the third, which is usually the longest. *Tail* long, broad, and nearly even. *Tarsi* rather longer than the middle toe, strong, and covered with broad transverse scales. *Toes* moderate; the outer toe rather longer than the inner, and united at the base; the hind toe long; the claws long, compressed, and very acute.

The species that compose this genus are peculiar to South America, where they are usually observed perched silently on the tops of small bushes, tall plants, or on the low branches of trees, from whence they watch the approach of an insect, after which they dart, and having captured it, return to another place. They are sometimes observed hunting the ground for the same kind of food, especially for Coleoptera, as well as for small seeds. The nest is coarsely put together in the midst of a bush.

1. T. *nengeta* (Linn.) Edwards's Birds, pl. 318. ? — Tyrannus pepoaza *Vieill.* Azara, No. 201.; Muscicapa polyglotta *Spix*, Av. Bras. t. 24., Swains. Nat. Libr. x. Flyc. pl. 8.; M. tænioptera *Pr. Bonap.*; Tyrannus cinereus *Vieill.*
2. T. *coronata* (Vieill.) Encyc. Méth. p. 855., Azara, No. 202. — Muscicapa vittigera *Licht.*
3. T. *dominicana* (Vieill.) Ency. Méth. p. 856., Azara, No. 203. — Fluvicola Azaræ *Gould*, Voy. of Beagle, Birds, p. 53. pl. x.
4. T. *irupero* (Vieill.) Ency. Méth. p. 856., Azara, No. 204. — Muscicapa mœsta *Licht.*
5. T. *nivea* (Spix), Av. Bras. t. 29. f. 1.
6. T. *variegata* (D'Orb. & Lafr.) Syn. Av. p. ., Voy. dans l'Amér. Mér. Ois. t. 39. f. 2., Voy. of Beagle, Birds, pl. xi.
7. T. *pyrope* (Kittl.) Vög. von Chili, t. 10.
8. T. *velata* (Licht.) Cat. Dupl. Berl. Mus. p. 54., Spix, Av. Bras. t. 22.
9. T. *murina* (D'Orb. & Lafr.) Syn. Av. p. 63.
10. T. ? *atricapilla* (Vieill.) Encyc. Méth. p. 856., Azara, No. 206.

* The Prince of Canino established this genus in 1825. *Xolmis* (1826) of M. Boie, *Nengetus* (1827) of Mr. Swainson, *Orsipus* (1835) and *Blechropus* (1837) of Mr. Swainson are synonymous with the name employed.

Fluvicola *Swains.**

Bill rather short, depressed, and broad at the base, with the culmen straight and slightly keeled, but suddenly curved and emarginated at the tip; the sides compressed; the gonys long and slightly ascending; the gape furnished with short weak bristles; the nostrils lateral, and placed in a membranous groove, with the opening rounded and exposed. *Wings* moderate, with the third and fourth quills nearly equal and longest. *Tail* moderate, broad, and rounded. *Tarsi* as long as, or longer than, the middle toe; slender, and covered in front with transverse scales. *Toes* moderate; the lateral toes nearly equal, the outer toe slightly united at its base, the hind toe moderate; the claws long, curved, and very acute.

The species are found in the warmer parts of South America. Their habits and manners are very similar to those given with the former genus.

1. F. *climazura* (Vieill.). — Muscicapa mystax *Spix*, Av. Bras. t. 31. f. 1, 2.; Musc. mystaceus *Pr. Max.*; Fluvicola cursoria *Swains.* Zool. Illustr. n s. pl. 47.; Platyrhynchus pseudogillia *Less.*

2. F. *cyanirostris* (Vieill.) Hartl. N. Dict. d'Hist. Nat. xxi. p. 447. — Muscicapa ruficapilla *Vieill.* Azara, No. 178, 181.; M. analis *Licht.*

3. F. *nigerrima* D'Orb. & Lafr. Syn. Av. p. 59.

4. F. *pica* (Bodd.) Pl. enl. 675. f. 1. 566. f. 3., Edw. Birds, pl. 348. f. 1. — Muscicapa bicolor *Gmel.*; M. albiventer *Spix*, Av. Bras. t. 30. f. 1, 2.

5. F. *œnanthoïdes* D'Orb. & Lafr. Syn. Av. p. 60., Voy. dans l'Amér. Mér. t. 38. f. 2.

6. F. *leucophrys* D'Orb. & Lafr. Syn. Av. p. 60., Voy. dans l'Amér. Mér. t. 38. f. 2.

7. F. *rufipectoralis* D'Orb. & Lafr. Syn. Av. p. 60., Voy. dans l'Amér. Mér. t. 37. f. 2.

8. F. *comata* (Licht.) Hartl. — Muscicapa lophotes *Temm.*; M. galeata *Spix*, Av. Bras. t. 37. t. 28. f. 1.; M. nigerrima *Vieill.?*; Blechropus cristatus *Swains.* Nat. Libr. x. Flyc. pl. 7.; M. rufogularis *Less.?*; Type of Knipolegus *Boie* (1826).

Lichenops *Comm.*†

Bill long and straight, with the culmen elevated at the base, keeled, and sloping to the tip, which is acute and emarginated; the sides much compressed; the gonys moderate and ascending; the nostrils basal, exposed, and rounded. *Wings* long and rounded, with the fourth and fifth quills equal and longest; the scapulars the length of the primaries. *Tail* rather long, broad, and nearly even. *Tarsi* longer than the middle toe, slender, and covered in front with very broad scales. *Toes* long and slender; with the inner toe rather longer than the outer, which is united at the base; the claws long, slender, and curved.

The type of this division is an inhabitant of Chili. Its modes of life are similar to those recorded of the first genus.

L. *perspicillata* (Gmel.).— Perspicilla leucoptera *Swains.* Nat. Libr. x. Flyc. pl. 9.; Ada Commersonii *Less.*; Muscicapa nigricans *Vieill.* Azara, No. 182, 228.; Lichenops erythropterus *Gould*, Voy. of Beagle, Birds, pl. 9.

* Established by Mr. Swainson in 1827. *Entomophagus* of Prince Neuwied (1831) is synonymous. It embraces *Knipolegus* of M. Boie (1826), with which *Hirundinea* of MM. D'Orbigny and Lafresnaye is synonymous.

† Commerson established this genus. *Ada* of M. Lesson (1831) and *Perspicilla* of Mr. Swainson are coequal.

ARUNDINICOLA *D'Orb. & Lafr.**

Bill rather long, slightly depressed, and straight, with the culmen rounded, and slightly sloping to the tip, which is suddenly curved and emarginated; the sides gradually compressed; the gonys long and ascending; the nostrils basal, rounded, and exposed. *Wings* rather short; with the first quill very short; the second longer than the third, narrowed throughout, and acutely pointed; the third shorter than the fourth, which is shorter than the fifth, the longest of all. *Tail* rather short, broad, and rounded. *Tarsi* as long as the middle toe, slender, and covered with broad scales. *Toes* long; with the outer toe longer than the inner, and united at the base; the hind toe long; the claws long, slender, curved, and acute.

The species are inhabitants of the warmer portions of South America.

1. A. *leucocephala* (Pall.) Pr. Max. Abbild. zur Naturg. Bras. t. — Muscicapa dominicana *Spix*, Av. Bras. t. 29. f. 1., Lath. Gen. Syn. pl. 29., Levaill. Ois. d'Afr. t. 159. ?, Azara, No. 176.

2. A. *flaviventris* D'Orb. & Lafr. Voy. dans l'Amér. Mér. p. 335.

ALECTRURUS *Vieill.*†

Bill short, rather depressed, and very broad at the base, with the culmen slightly curved, and the sides compressed to the tip, which is emarginated; the gonys long and slightly ascending; the gape furnished with long prominent bristles; the nostrils lateral, with the opening rounded and exposed. *Wings* moderate, with the third and fourth quills nearly equal and longest; the first quill usually singularly formed. *Tail* more or less long, composed of differently formed feathers, and sometimes compressed. *Tarsi* as long as the middle toe, slender, and covered in front with transverse scales. *Toes* long; the lateral toes nearly equal; the hind toe long; the claws long, slender, slightly curved, and very acute.

The species that compose this division are found in the warmer parts of South America.

1. A. *tricolor* Vieill. — Muscicapa alector *Pr. Max.* Temm. Pl. col. 155.; M. alectrura *Vieill.*; Alectrura Azaræ *Swains.* Nat. Libr. x. Flyc. pl. 6., Azara, No. 225.

2. A. *guirayetapa* Vieill. — Muscicapa psalura *Temm.* Pl. col. 286. 296.; M. risoria *Vieill.* Gal. des Ois. t. 131.; Yetapa psalura *Less.* Azara, No. 226.

GUBERNETES *Such.*‡

Bill short, depressed, rather strong, and broad at the base, with the culmen slightly curved, and the sides compressed to the tip, which is emarginated; the gonys long and slightly ascending; the gape furnished with bristles; the nostrils lateral, and placed in a short membranous groove, with the

* MM. D'Orbigny and Lafresnaye established this genus in 1839.

† It was in 1816 that Vieillot established this genus. *Xenurus* of M. Boie (1826) and *Muscipipra* of M. Lesson (1831) are synonymous.

‡ Mr. Such established this division in 1825.

opening rounded and exposed. *Wings* moderate, with the second and third quills equal and longest. *Tail* much lengthened and greatly forked. *Tarsi* shorter than the middle toe, strong, and covered in front with transverse scales. *Toes* moderate, strong, with the lateral ones equal, and the outer slightly united at the base; the hind toe long; the claws long, compressed, and acute.

The type of this genus is peculiar to the tropical parts of South America.

G. *Yetapa* (Vieill.) Encyc. Méth. p. 834. — Muscicapa yiperu *Licht.*; M. longicauda *Spix*, Av. Bras. t. 27.; Gubernetes Cunninghami *Such*, Zool. Journ. ii. pl. 4.: G. forficata *Swains.* Nat Libr. x. Flyc. pl. 5.

Copurus *Strickl.**

Bill short, depressed, and broad at the base, with the culmen rounded, and slightly sloping to the tip, which is suddenly curved and emarginated; the gonys long and slightly ascending; the gape furnished with a few short bristles; the nostrils basal, rounded, and exposed. *Wings* long, with the third and fourth quills equal and longest. *Tail* rather long, broad, and even, with the two middle feathers much prolonged, and the ends only webbed. *Tarsi* as long as the middle toe, slender, and covered with broad scales. *Toes* rather short, with the outer rather longer than the inner, and united at the base; the claws short, curved, compressed, and acute.

The two species of this division are found in the warmer parts of South America.

1. C. *filicauda* (Spix), Strickl. Av. Bras. t. 14. — Muscicapa colonus *Vieill.*; M. leucocilla *Hahn.*; M. monachus *Licht.* Azara, No. 180.; Platyrhynchus platurus *Vieill.* ?

2. C. *leuconotus* Lafr. Rev. Zool. 1842. p. 335.

* Mr. Strickland established this genus in 1842.

Hillmandel & Walton lithographers

WELCOMPON TESTIMONIAL

SAUROPHAGUS.
Lictor (Licht)

The third Subfamily,

TYRANNINÆ, or TYRANTS,

have the Bill more or less long, broad, and depressed at the base, and the sides gradually compressed to the tip, which is hooked and emarginated; the gape sometimes furnished with long and strong bristles; the Nostrils basal, with the opening small, usually rounded, and hidden by the projecting feathers and bristles: the Wings more or less long, and generally pointed: the Tail moderate, and sometimes emarginated: the Tarsi short, and covered with broad scales: the Toes generally rather short; the outer longer than the inner, and united at the base; the hind toe moderate, and padded beneath: the Claws rather short, and very acute.

MACHETORNIS.*

Bill rather long, with the culmen sloping, and the sides much compressed to the tip, which is slightly emarginated; the lateral margins slightly curved, and the gonys long and ascending; the gape furnished with long slender bristles; the nostrils basal and lateral; with the opening small, rounded, and partly covered by the projecting plumes. *Wings* long; with the first three quills graduated and pointed; the fourth and fifth equal and longest. *Tail* moderate and rounded. *Tarsi* longer than the middle toe; and covered with broad transverse scales. *Toes* moderate; the outer toe longer than the inner, and united at its base; the hind toe long and rather strong; the claws moderate and slightly curved, except that of the hind toe, which is long and strong.

The typical species is found in Tropical America, and is mostly seen on the sandy pasture ground, upon which it walks and occasionally runs, every now and then taking a short flight after such insects as have just taken wing, having been disturbed on its approach.

M. *rixosa* (Vieill.) — Muscicapa Joazeiro *Spix*, Av. Bras. t. 23.; Tyrannus ambulans *Swains.*

SCAPHORHYNCHUS *Pr. Max.*†

Bill rather long, very broad, and depressed; with the culmen keeled, curved, and the sides gradually compressed to the tip, which is hooked and emarginated; the gonys long, rounded beneath, and

* Originally established under the name of *Chrysolophus*, by Mr. Swainson, in 1837; which word, having been previously used, was altered by me to the above in 1841.

† Established by the Prince of Neuwied in 1831. *Tyrannus* of Vieillot (1816) and *Megastoma* of Mr. Swainson (1837) are synonymous.

ascending to the tip, which is acute, and turned up; the nostrils basal and lateral, with the opening small and rounded. *Wings* rather long; with the third and fourth quills equal and longest. *Tail* moderate, and slightly emarginated. *Tarsi* shorter than the middle toe, very slender, and covered in front with broad scales. *Toes* very short and slender; with the outer toe longer than the inner, and united at the base; the hind toe short and padded beneath; the claws short and slightly curved.

These species are found in the intertropical regions of South America.

1. S. *pitangua* (Linn.) Strickl. Pl. enl. 212. — Tyrannus carnivorus *Vieill.*; Scaphorhynchus sulphuratus *Pr. Max.*; T. brasiliensis *Briss.*; Megastoma ruficeps *Swains.* ?
2. S. *flaviceps* (Swains.) Two Cent. and a Quart. p. 285.
3. S. *atriceps* (Swains.) Two Cent. and a Quart. p. 285.
4. S. *chrysocephalus* Tschudi, Fauna Peruana, p. 12. t. 8. f. 1.

Saurophagus *Swains.**

Bill long and straight, with the culmen slightly curved, and the sides much compressed to the tip, which is abruptly hooked and emarginated; the gonys long and ascending; the gape furnished with rather short weak bristles; the nostrils basal, with the opening small, rounded, and concealed by the projecting plumes. *Wings* long; with the third and fourth quills equal and longest. *Tail* moderate, and slightly emarginated. *Tarsi* shorter than the middle toe, and covered in front with broad transverse scales. *Toes* moderate, and rather slender; the outer toe rather longer than the inner, and united at the base; the hind toe moderate, and broadly padded beneath; the claws long, slender, and acute.

The birds that compose this genus are found in the intertropical portions of America. They frequently hunt the ground, hovering in the air over one spot like a hawk, and then proceeding to do the same over another, but their stoop is very inferior to that bird's. They are sometimes observed in the neighbourhood of water, and there remain stationary, watching and catching any small fish that swims near the surface. Their flight is undulatory; and in the evening they sometimes perch on a bush, repeating a shrill and singular cry, which somewhat resembles articulate words.

1. S. *sulphuratus* (Linn.) Swains. Pl. enl. 296., Vieill. Ois. d' Amér. t. 47. — Tyrannus magnanimus et T. bellicosus *Vieill.*
2. ? S. *flavus* (Gmel.) Pl. enl. 249. — Corvus leucogaster *Bodd.*
3. S. *Lictor* (Licht.) Cat. Dupl. Berl. Mus. p. 49.—Saurophagus pusillus *Swains.*; S. Swainsoni *Gould.* ?

Tyrannus *Cuv.*†

Bill more or less long, broad, and rather depressed at the base, with the culmen slightly curved, and the sides compressed to the tip, which is hooked and emarginated; the gonys long and ascending; the

* Originally established in 1827 by Mr. Swainson under the name of *Pitangus*, which he changed to the above name in 1831. *Apolites* of Chev. Sundevall (1836) is synonymous.

† Established by Cuvier between 1799 and 1800. *Drymonax* of M. Gloger (1827) is probably synonymous.

gape furnished with long bristles; the nostrils basal, with the opening small, rounded, and partly covered by bristles. *Wings* rather long; with the second, third, and sometimes fourth and fifth quills equal and longest, with the tips of all more or less suddenly sinuated and pointed. *Tail* moderate, and slightly emarginated. *Tarsi* as long as the middle toe, slender, and covered in front with broad scales. *Toes* short and slender; the outer toe rather longer than the inner, and united at the base; the hind toe short, and broadly padded beneath; the claws short, slender, and very acute.

The species are inhabitants of the tropical parts of America, where they are generally seen sitting on the trees or on some prominent place, watching the approach of insects, after which they take a sweep, and, having secured them, return sometimes to the same perch. They also prey on small fish and on reptiles, and occasionally feed on berries. It is not unusual to observe one of these birds on a twig overhanging the surface of the water, into which they dive repeatedly, and then remain for some time quiet to dry and dress their plumage in the sun. Their flight is quick and rapid; and they have been observed slowly hovering over the fields or rivers, as if watching for their food, which, having espied, they secured by a sudden sweep. Some of the species are remarkable for their courage, especially during the breeding season: should a crow, hawk, or even an eagle, approach their nest, they launch into the air to meet him, mount to a considerable height above him, and dart down on his back, sometimes fixing there to the great annoyance of the intruder, who, if no convenient retreat or resting-place be near, endeavours by various evolutions to rid himself of his merciless adversary. The nest is built in trees, at no great height from the ground; externally it is composed of twigs well woven together with tow and wool, and lined with dry fibrous grass and horse-hair. Some species collect together loose hay, feathers of birds, hog's bristles, pieces of cast off snake-skins, and dog's hairs, in the hollow of a tree. The eggs are usually four or five in number.

1. T. *intrepidus* Vieill. Pl. enl. 676. — Muscicapa tyrannus *Briss.*; Muscicapa animosa *Licht.* Wils. Amer. Orn. pl. 13. f. 1.; Tyrannus pipiri *Vieill.* Ois. d'Amér. t. 44., Audub. B. of Amer. pl. 79.

2. T. *matutinus* Vieill. Pl. enl. 537. — Lanius tyrannus *Linn.* Voy. l'Isle de Cuba, Ois. t. 14.

3. ? T. *griseus* Vieill. Ois. d'Amér. Sept. t. 46. — Tyrannus dominicensis *Briss.* Audub. B. of Amer. pl. 170.

4. T. *verticalis* (Say), Pr. Bonap. Amer. Orn. pl. 2. f. 2., Audub. B. of Amer. pl. 359. f. 1, 2. — Tyrannus vociferans *Swains.*

5. T. *cinereus* Vigors, Zool. Beechey's Voy. p. 17.

6. T. *caudifasciatus* D'Orb. Voy. l'Isle de Cuba, t. 12.

7. T. *magnirostris* D'Orb. Voy. l'Isle de Cuba, t. 13.

8. T. *rufiventris* Vieill. Ency. Méth. p. 856. — Azara, No. 205.

9. T. *melancholicus* Vieill. N. Dict. d'Hist. Nat. xxxv. p. 48. — Muscicapa Despotes *Licht.*; M. furcata *Spix*, Av. Bras. ii. t. 19.; Tyrannus crudelis *Swains.*

10. T. *rusticus* (Licht.) Pr. Max. Beitr. iii. p. 866.—Muscicapa cinerascens *Spix*, Av. Bras. ii. 21.; Tyrannus calcaratus *Swains.* Jard. & Selby, Ill. Orn. pl. 37.

11. T. *crassirostris* Swains. Quart. Journ. of Sci. 1826. p. 273.

12. T. *Cinchoneti* Tschudi, Fauna Peruana, p. 12. t. 8. f. 2.

13. T. *vorax* Vieill. N. Dict. d'Hist. Nat. xxxv. p. 90.

14. ? T. *americanus* (Lath.) Pl. enl. 397.

15. T. ——. — Tyrannus rufiventris *D'Orb. & Lafr.* Syn. Av. p. 45., Voy. dans l'Amér. Mér. Ois. t. 32, f. 3, 4.

16. T. *aurantio-atro-cristatus* D'Orb. & Lafr. Syn. Av. p. 45.

Milvulus *Swains.**

Bill moderate, broad, and depressed at the base, with the culmen slightly sloping, and the sides compressed to the tip, which is hooked and emarginated; the gonys long and slightly ascending; the nostrils lateral, with the opening rounded, and partly covered by the projecting bristles. *Wings* long; with the first quill long, the second longest, and the third equal to the first, and all the quills suddenly

* Established by Mr. Swainson in 1827. *Muscipipra* of M. Lesson (1831) is synonymous.

emarginated and pointed. *Tail* more or less lengthened, and very deeply forked, which is formed by the lengthened outer feathers. *Tarsi* as long as the middle toe, rather slender, and covered in front with broad transverse scales. *Toes* long; with the outer toe longer than the inner, and united at the base; the hind toe moderate, and broadly padded; the claws long, slender, and very acute.

The species that compose this genus are found in the tropical portions of America; they are seen solitary or in small troops, perched on the branch of a tree, whence they occasionally dart after passing insects. Berries, also, form a portion of their subsistence. Some are observed in inundated places, resting on the tufts of herbage which appear above the water; while thus seated they are continually opening and shutting the outer lengthened feathers of their tail. The singular form of this organ gives them the power of turning very short in their aerial evolutions, during which they instantaneously open and shut the long feathers either in a horizontal or in a vertical plane. Like other birds of this subfamily they possess great courage, attacking birds far superior to themselves in size.

1. M. *tyrannus* (Linn.) Pr. Bonap. Pl. enl. 571. f. 1. — Tyrannus savana *Vieill.* Audub. B. of Amer. pl. 168., Pr. Bonap. Amer. Orn. pl. 1. f. 1., Vieill. Ois. d'Amér. Sept. pl. 43.; Tyr. violentus *Vieill.*

2. M. *forficatus* (Gmel.) Swains. Pl. enl. 677., Pr. Bonap. Amer. Orn. pl. 2. f. 1., Audub. B. of Amer. pl. 359. f. 3.

3. M. *bellulus* (Vieill.) N. Dict. d'Hist. Nat. xxxv. p. 75.

4. M. *vetulus* (Von Offers), Hartl. — Tyrannus longipennis *Swains.* Journ. of Sci. and of Arts, p. 283., Jard. & Selby, Ill. Orn. pl. 42.

5. M. *monachus* Hartl. Rev. Zool. 1844. p. 214.

6. M. *rufitorques* Hartl. Rev. Zool. 1844. p. 214.

Myiobius.*

Bill short, broad, and depressed at the base, with the culmen slightly curved, and the sides compressed to the tip, which is hooked and emarginated; the gonys long and ascending; the gape furnished with lengthened bristles; the nostrils lateral, with the opening small and rounded. *Wings* long and pointed; with the first quill long, and the second nearly as long as the third and fourth, which are equal and longest. *Tail* moderate, and slightly emarginated. *Tarsi* as long as the middle toe, rather slender, and covered in front with transverse scales. *Toes* rather short and slender; with the outer toe rather longer than the inner, and united at the base; the hind toe moderate, and padded beneath; the claws long, slender, and acute.

The species are found throughout both North and South America, migrating from place to place on the change of seasons. They are usually seen quietly perched on the branches of the trees which are situated in the most solitary parts of the forests or swamps, and some are occasionally noticed seated on buildings, whence they dart after passing insects, and, having secured them, generally return to the same place. On alighting they frequently move their tails in the manner of Wagtails, and at the same time utter their singular but pleasing notes. Berries also, in certain seasons, form a principal portion of their subsistence. The nest is formed on the trees or in hollows, of moss, sometimes cemented together with mud, but always lined internally with various soft materials. The eggs are usually five in number.

1. M. *crinitus* (Linn.) Pl. enl. 569. f. 1. ?, Wils. Amer. Orn. 13. f. 2., Audub. B. of Amer. pl. 129.—Tyrannus irritabilis *Vieill.*; Muscicapa ludoviciana *Gmel.* Vieill. Ois. d'Amér. t. 45.

2. M. *audax* (Gmel.) Pl. enl. 453. f. 2. — Tyrannus solitarius *Vieill.* Azara, No. 196.

3. M. *Cooperi* (Nutt.) — Tyrannus borealis *Swains.* Faun. Bor. Amer. ii. p. 141. pl. 35., Audub. B. of Amer. pl. 174.

4. M. *ferox* (Gmel.) Pl. enl. 571. f. 1. — Type of Myiarchus *Cabanis* (1844).

5. M. *tuberculifer* (D'Orb. & Lafr.) Syn. Av. p. 43. Voy. dans l'Amér. Mér. Ois. t. 32. f. 1. 2.

6. M. *nunciola* (Wils.) Catesby, Carol. pl. 53., Wils. Amer. Orn. pl. 13. f. 4., Vieill. Ois. d'Amér. Sept. pl. 40., Audub. B. of Amer. pl. 120. — Muscicapa fusca *Gmel.*

* Originally established by Mr. Swainson, in 1827, under the name of *Tyrannula*; which, having been used with the termination in *us*, was changed by me in 1838 to the above. It embraces *Myiarchus* of M. Cabanis (1844).

7. M. *ater* (Gmel.) — Muscicapa Phœbe *Lath.* Audub. B. of Amer. pl. .; Tyrannula Richardsoni *Swains.* Faun. Bor. Amer. ii. p. 146. pl. 45. low. fig.; Tyrannus atriceps *D'Orb. & Lafr.*

8. M. *acadicus* (Gmel.) — Muscicapa querula *Wils.* Amer. Orn. pl. 13. f. 3., Audub. B. of Amer. pl. 144.; Platyrhynchus virescens *Vieill.*

9. M. *Traillii* (Audub.) B. of Amer. pl. 45. — Muscicapa virens *Audub.*

10. M. *virens* (Linn.) — Muscicapa rapax *Wils.* Amer. Orn. ii. pl. 13. f. 5.; Musc. querula *Vieill.*, Ois. d'Amér. Sept. pl. 39., Audub. B. of Amer. 115.; Tyrannula obscura *Swains.*?

11. M. *pusillus* (Swains.) Faun. Bor. Amer. pl. 46. upp. fig., Audub. B. of Amer. pl. 415.

12. M. *Saya* (Pr. Bonap.) Syn. of Amer. Birds, p. 67., Amer. Orn. pl. 2. f. 3. — Tyrannula pallida *Swains.* Faun. Bor. Amer. pl. 45., Audub. B. of Amer. pl. 359. f. 4, 5.

13. M. *atropurpureus* (Licht.) Tschudi, Fauna Peruana, p. 13.

14. M. *nigricans* (Swains.) Phil. Mag. 1827. p. 367., Audub. B. of Amer. pl. 415.

15. M. *auriceps* (Gould), Voy. of Beagle, Birds, p. 47.

16. M. *parvirostris* (Gould), Voy. of Beagle, Birds, p. 48.

17. M. *magnirostris* (Gould), Voy. of Beagle Birds, pl. 8.

18. M. *barbatus* (Gmel.) Pl. enl. 830., Swains. Zool. Illustr. pl. 116. — Platyrhynchus xanthopygius *Spix*, Av. Bras. pl. 9. f. 1.

19. M. *leucotis* (Swains.) Quart. Journ. of Sci. 1826, p. 276., Pl. enl. 830. f. 2.?

20. M. *nævius* (Bodd.) — Muscicapa virgatus *Gmel.* Pl. enl. 574. f. 2.

21. M. *Vieillotii* (D'Orb.) — Muscipeta cinnamomea *D'Orb. & Lafr.* Syn. Av. p. 49.

22. M. *chrysoceps* (Spix), Av. Bras. t. 11. f. 2. — Tyrannula ferruginea *Swains.* B. of Br. pl. 53.

23. ? M. *flaviventer* (Spix), Av. Bras. t. 15. f. 1. — Tyrannula modesta *Swains.* B. of Br. pl. 48.

24. M. *sibilator* (Vieill.) Ency. Méth. p. 831. — Muscicapa sibilans *Licht.*; Tyrannula curtipes *Swains.* B. of Br. pl. 54.

25. M. *cayanensis* (Linn.) Pl. enl. 569. f. 2. — Muscicapa flava *Vieill.* Ois. d'Amér. Sept. t. 41.

26. M. *similis* (Spix), Av. Bras. t. 25. — Tyrannula superciliosa *Swains.* B. of Br. pl. 46.; Muscicapa miles *Licht.*; M. trivirgata *Pr. Max.*?

27. M. *martinicus* (Linn.) Pl. enl. 568. f. 1. — Muscicapa albicapilla *Vieill.*?

28. M. *fuscus* (Bodd.) Pl. enl. 574. f. 1. — Muscicapa fuliginosa *Gmel.*

29. M. *olivus* (Bodd.) Pl. enl. 574. f. 2. — Muscicapa agilis *Gmel.*

30. M. *albiceps* (Lafr. & D'Orb.) Syn. Av. p. 47.

31. M. *platyrhynchus* (Pr. Max.) Beitr. iii. p. 932.

32. M. *fuscatus* (Pr. Max.) Beitr. iii. p. 902.

33. M. *uropygiatus* (Pr. Max.) Beitr. iii. p. 868.

34. M. *affinis* (Swains.) Phil. Mag. 1827. p. 367.

35. M. *barbirostris* (Swains.) Phil. Mag. 1827. p. 367.

36. M. ? *musicus* (Swains.) Phil. Mag. 1827. p. 368.

37. M. *megacephalus* (Swains.) B. of Bras. pl. 47.

38. M. *caniceps* (Swains.) B. of Bras. pl. 49.

39. M. ——— ? — Tyrannula fumigata *Boiss.* Rev. Zool. 1840. p. 71.

40. M. *luteoventer* (Less.) Rev. Zool. 1840. p. 354.

41. M. *diadema* (Harth.) Rev. Zool. 1843. p. 289. — Muscicapa fuscocapilla *Lafr.*

42. M. *cinnamomeus* (Vieill.) — Myiobius pyrrhopterus *Hartl.*

43. M. *ardosiacus* (Lafr.) Rev. Zool. 1844. p. 80.

44. M. *Tschudii* (Hartl.) Rev. Zool. 1844. p. 369.

45. M. *icterophrys* (Lafr.) Rev. Zool. 1845. p. 341.

46. M. *nigricapillus* (Lafr.) Rev. Zool. 1845. p. 341.

47. M. *rufipectus* (Lafr.) Rev. Zool. 1846, p. 207.

48. M. *spadiceus* (Gmel.).

49. M. *surinamus* (Linn.).

50. M. *minutus* (Gmel.).

51. M. *superciliosus* (Gmel.).

52. M. *ruficaudatus* (Vieill.) N. Dict. d'Hist. Nat. xxvii. p. 17.

53. ? M. *auricularis* (Vieill.) N. Dict. d'Hist. Nat. xxvii. p. 16.

54. ? M. *leucophaius* (Vieill.) N. Dict. d'Hist. Nat. xxvii. p. 12.

55. ? M. *melanops* (Vieill.) N. Dict. d'Hist. Nat. xxvii. p. 14.

56. M. *striatus* (Less.) Rev. Zool. 1839. p. 41.

57. M. *L'herminieri* (Less.) Rev. Zool. 1839. p. 104.

58. M. *rufotæniatus* Drap. Dict. d'Hist. Nat. vii. p. 401.

59. M. *caribæus* (D'Orb.) Voy. l'Isle de Cuba, p. 92.

60. M. *eximius* Temm. Pl. col. 144. f. 2.

61. M. *minimus* (Audub.) B. of Amer. 2. edit. pl. 491.

62. M. ——— ? — Muscicapa flaviventris *Audub.* B. of Amer. 2. edit. pl. 490.

63. M. *turdinus* (Pr. Max.) Beitr. iii. p. 817.

64. M. *virescens* (Pr. Max.) Beitr. iii. p. 802.

65. M. *rivularis* (Vieill.).

66. M. *chrysochloris* (Pr. Max.) Beitr. iii. p. 793.

67. M. *brevipes* (Pr. Max.) Beitr. iii. p. 831.

68. M. *asilus* (Pr. Max.) Beitr. iii. p. 894. — Platyrhynchus brevirostris *Spix*, Av. Bras. t. 15. f. 2.?

69. M. *strigilatus* (Pr. Max.) Beitr. iii. p. 900.

70. M. *ferrugineus* (Less.) Rev. Zool. 1839. p. 42.

71. M. *albicollis* (Vieill.) N. Dict. d'Hist. Nat. xxxv. p. 89. — Muscicapa legatus *Licht.*

72. M. *bimaculatus* D'Orb. & Lafr. Syn. Av. p. 48.

73. M. *armillatus* (Vieill.) N. Dict. d'Hist. Nat. xxi. p. 448. — Muscipeta ralloïdes *D'Orb.*

74. M. *brevirostris* (D'Orb. & Lafr.) Syn. Av. p. 49.

75. M. *murinus* (Spix), Av. Bras. t. 16. f. 2.

76. M. *fumigatus* (D'Orb. & Lafr.) Syn. Av. p. 43.

77. M. *Guilleminii* (D'Orb.) — Muscipeta obscura *D'Orb. & Lafr.* Syn. Av. p. 48.

78. M. *rufinus* (Spix), Av. Bras. t. 31.

79. M. ? *sulphureus* (Spix), Av. Bras. t. 20.

PYROCEPHALUS *Gould.**

Bill short, broad, and depressed at the base, with the culmen slightly curved, and the sides compressed to the tip, which is hooked and emarginated; the gonys long, and slightly ascending; the

* Established by Mr. Gould in 1838.

gape furnished with bristles; the nostrils lateral, with the opening rounded, and covered with projecting bristles. *Wings* long and pointed; with the first quill long, and the second to the fourth equal and longest. *Tail* moderate and emarginated. *Tarsi* shorter than the middle toe, and covered with broad scales. *Toes* moderate; with the outer toe rather longer than the inner, and united at the base; the hind toe moderate, and broadly padded; the claws short, curved, and acute.

These birds frequent the tropical parts of South America and the Galapagos Archipelago. They are migratory birds, appearing in different places on the change of seasons; and are usually observed on the bushes, but some seem to prefer reeds in moist places, while others are noticed on the ground; however they may be located, insects form their chief subsistence.

1. P. *rubineus* (Bodd.) — Muscicapa coronata *Gmel.* Pl. enl. 675. f. 1., Nat. Misc. pl. 569.
2. P. *parvirostris* Gould, Voy. of Beagle, pl. vi.
3. P. *obscurus* Gould, Voy. of Beagle, p. 45.
4. P. *nanus* Gould, Voy. of Beagle, pl. vii.
5. P. *dubius* Gould, Voy. of Beagle, p. 46.
6. P. *cinnamomeus* (Gmel.).
7. P. *divaricatus* (Pr. Bonap.) Proc. Zool. S. 1837. p. 112.
8. P. *circumcinctus* (Swains.) B. of Bras. pl. 50.

Elania *Sundev.**

Bill moderate, rather broad, and slightly depressed at the base, with the culmen curved, and the sides compressed to the tip, which is emarginated, the lateral margins slightly curved; the gonys short and ascending; the nostrils lateral, with the opening rounded and exposed; the gape furnished with very short weak bristles. *Wings* rather short, and with the third quill the longest. *Tail* moderate, and slightly emarginated. *Tarsi* as long as, or shorter than, the middle toe, and covered in front with broad scales. *Toes* moderate, and rather slender; with the outer toe rather longer than the inner, the hind toe long and strong; the claws moderate, slightly curved, and acute.

It is in the warmer parts of South America that the species which compose this division are found.

1. E. *pagana* (Licht.) Sundev. Cat. Berl. Mus. p. 54.
2. E. *brevirostris* (Pr. Max.) Sundev. — Platyrhynchus paganus *Spix*, Av. Bras. t. 16. f. 1.
3. E. *modesta* (Pr. Max.) Sundev. Beitr. iii.
4. E. *aurifrons* (Pr. Max.) Sundev. Beitr. iii. p. 829.
5. E. *obsoleta* (Natt.) Hartl. Pl. col. 275. f. 1.
6. E. *virescens* (Temm.) Pl. col. 175. f. 1.
7. E. *oleaginea* (Licht.) Cat. Dupl. Berl. Mus. p. 565. — Muscicapa chloronota *Less.*?
8. E. *poliocephala* (Tschudi), Fauna Peruana, p. 15. t. 10. f. 1. — Type of Mionectes *Cabanis* (1841).
9. E. *icterophrys* (Vieill.) Ann. Nat. Hist. xiii. pl. xii.—Type of Suiriri *D'Orb.* (1837).
10. E. *luteocephala* (Less.) Tr. d'Orn. p. 392., Mag. de Zool. 1833. Ois. t. 13.
11. E. *viridis* Lafr. Mag. de Zool. 1833. p.
12. E. *rufo-olivacea* Lafr. Mag. de Zool. 1833. p.
13. E. *superciliaris* (Tschudi), Fauna Peruana, p. 15., 4to t. 10. f. 2. — Type of Leptopogon *Cab.* (1841).
14. E. *cinereus* (Tschudi), Fauna Peruana, p. 16.
15. E. *ventralis* (Natt.) Pl. col. 275. f. 2.
16. E. *Suiriri* (Vieill.) N. Dict. xxi. p. 287., Azara, No. 179. — Suiriri Suiriri *D'Orb.*
17. E. *striaticollis* (D'Orb. & Lafr.) Syn. Av. p. 51., Voy. dans l'Amér. Mér. Ois. t. 35. f. 2.
18. E. *vermivora* (Gmel.) Azara, No. 154.
19. E. *bivittata* (D'Orb. & Lafr.) Syn. Av. p. 51.
20. E. *viridicata* (Vieill.) N. Dict. d'Hist. Nat. ii. p. 171. — Muscicapa elegans *D'Orb. & Lafr.*
21. E. *angustirostris* (D'Orb. & Lafr.) Syn. Av. p. 52.

* Established by Chevalier Sundevall in 1835. *Paroides* of M. Lesson (1837) and *Muscicapara* of M. D'Orbigny and Baron Lafresnaye (1840) are synonymous. It embraces *Suiriri* of M. D'Orbigny (1837), *Mionectes* and *Leptopogon* of M. Cabanis (1841).

22. E. *albicilla* (Vieill.)—Muscicapara Gaimardii *D'Orb.*?
23. E. *albicapilla* (Vieill.) Ois. d'Amér. Septr. t. 37.
24. E. *leucophrys* (D'Orb. & Lafr.) Syn. Av. p. *53.*
25. E. *stramineo-ventris* (D'Orb. & Lafr.) Syst. Av. p. *53.*
26. E. *olivacea* (D'Orb. & Lafr.) Syn. Av. p. 54.—Muscicapara boliviana *D'Orb.*
27. E. ———? — Elania modesta *Tschudi,* Fauna Peruana, p. 14.
28. E. ———? — Elania brevirostris *Tschudi,* Fauna Peruana, p. 14.
29. E. *viridiflava* Tschudi, Fauna Peruana, (8vo) p. 14. (4to) t. 9. f. 2.
30. E.? *obscura* (Vieill.) N. Dict. d'Hist. Nat. xxi. p. 451.
31. E.? *phœnoleuca* (Vieill.) Ency. Méth. p. 824., Azara, No. 192.
32. E.? *nigricans* (Vieill.) N. Dict. d'Hist. Nat. xxi. p. 454., Azara, No. 182.
33. E.? *punctata* (Vieill.) N. Dict. d'Hist. Nat. xxi. p. 455., Azara, No. 184.
34. E.? *rubra* (Vieill.) Encyc. Méth. p. 231., Azara, No. 188.
35. E.? *ruficapilla* (Vieill.) Encyc. Méth. p. 833., Azara, No. 878.

Euscarthmus *Pr. Max.**

Bill short, rather broad, and slightly depressed at the base, with the culmen curved, and the sides more or less compressed to the tip, which is emarginated; the gonys short and ascending; the nostrils lateral, with the opening small, oval, and partly covered by projecting weak bristles. *Wings* short and rounded; with the third, fourth, and sometimes the fifth quills the longest. *Tail* rather long, and more or less rounded. *Tarsi* longer than the middle toe, slender, and covered with broad scales. *Toes* short; with the lateral toes equal, and the outer united at the base; the hind toe rather long, and padded beneath.

The species of this genus are found in various parts of South America. They frequent the bushes in small troops of three or four individuals, and are seen actively engaged in hopping about from branch to branch in search of insects. Some species seem to prefer the borders of lakes, rivulets, and moist places, where they are often observed resting on the aquatic plants, and, while thus situated, they occasionally spread their tails like a fan. The nest is usually placed in a bush, and is composed in the manner which is general in the family.

1. E. *meloryphus* Pr. Max. Beitr. ii. p. 947.
2. E. *nidipendulus* Pr. Max. Beitr. ii. p. 950.
3. E. *pectoralis* (Vieill.) Encycl. Méth. p. 496. — Euscarthmus superciliaris *Pr. Max.*?
4. E. *parulus* (Kittl.) Kittl. Mém. l'Acad. Imp. des Sc. St. Petersb. 1831. t. 9. — Sylvia Bloxami *Gray.*
5. E. *albo-coronatus* (Gould), Voy. of Beagle, p. 49.
6. E. *albo-cristatus* (Vigors), Zool. Journ. No. xviii. p. 273.
7. E. *nigricans* (Vieill.) Azara, No. 167.
8. E. *reguloides* (D'Orb. & Lafr.) Syn. Av. p. *57.*, Voy. dans l'Amér. Mér. Ois. t. 37. f. 1. — Vermivora elegans *Less.*?
9. E. *cinereus* Strickl. Ann. of Nat. Hist. 1844. p. 414.
10. E.? *galeatus* (Bodd.) Pl. enl. 391. f. 1. — Motacilla cristata *Gmel.*
11. E.? *subcristatus* (Vieill.) N. Dict. d'Hist. Nat. ii. 229., Azara, No. 160. — Muscicapa straminea *Temm.* Pl. col. 167. f. 2.; M. cristatus *D'Orb. & Lafr.*
12. E. *pileatus* Tschudi, Fauna Peruana, p. 13. t. 9. f. 1. — Type of Orcheilus *Cab.* (1845).
13. E. *rufipes* Tschudi, Fauna Peruana, p. 13.

* Established by the Prince of Neuwied in 1831. It embraces *Orcheilus* of M. Cabanis (1845).

May, 1847.

C. Hullmandel's Patent Lithotint.

TITYRA
leucotis. G.R.Gray

The fourth Subfamily,

TITYRINÆ or BECARDS,

have the Bill generally short, and broad at the base, with the culmen slightly depressed, rounded, and curved, and the sides suddenly compressed to the tip, which is emarginated; the nostrils lateral, rounded, and exposed; the Wings long and pointed; the Tail short and rounded on the sides; the Tarsi short, and covered in front with narrow scales; the Toes moderate, with the lateral ones nearly equal; the claws moderate, curved, and acute.

TITYRA *Vieill.**

Bill shorter than the head, and broad at the base, with the culmen more or less depressed, rounded, and gently curved, and the sides compressed to the tip, which is emarginated and sometimes hooked; the gonys long and slightly ascending; the nostrils lateral, pierced in the substance of the bill, rounded, and slightly covered with a few short bristles. *Wings* long and pointed, with the first quill short, the second shorter than the third and fourth, which are the longest, and sometimes furnished with a spurious quill beneath the first quill, which is either pointed or emarginated at its end. *Tail* moderate, broad, and rounded on the sides. *Tarsi* rather longer than the middle toe, strong, and covered in front with narrow scales. *Toes* long, with the lateral ones nearly equal, the inner rather the shortest, the outer united at the base; the hind toe long and strong; the claws moderate, curved, and acute.

The birds that compose this genus are found in the warmer parts of South America, and the islands of the West Indies. They migrate from place to place, and are usually seen perched on the highest branches of the lofty trees of the primeval forests. Insects form their chief subsistence; these they capture by short flights, and return again to the same perch to watch for others passing within a certain range.

1. T. *cayana* (Linn.) Pl. enl. 304. — Tityra cinerea *Vieill.*; Psaris cayanensis *Swains.* Spix, Av. Bras. t. 44. f. 1., Gal. des Ois. t. 134., Azara, No. 207.? Pl. enl. 377.; Ps. nævius *Less.*; Ps. virgata *H. Smith*, Griff. An. Kingd. pl.?
2. T. *inquisitor* (v. Olfers), Licht. Cat. Dupl. Berl. Mus. p. 50.— T. erythrogenys *Selby*, Zool. Journ. ii. p. 483., Swains. Nat. Libr. x. 82. pl. 3.
3. T. *brasiliensis* (Swains.) Two and a Quart. p. 286.
4. T. *guianensis* (Swains.) Two Cent. and a Quart. p. 286.
5. T. *Nattererii* (Swains.) Two Cent. and a Quart. p. 286.
6. T. *personata* Jard. & Selby, Ill. Orn. pl. 24. — Pachyrhynchus semifasciatus *Spix*, Av. Bras. t. 44. f. 1.; Psaris mexicanus *Less.*
7. T. *Jardinii* (Swains.) Zool. Ill. n. s. pl.
8. T. *Selbii* (Swains.) Two Cent. and a Quart. p. 286.
9. T. *strigata* (Swains.) Two Cent. and a Quart. p. 287.
10. T. *cristata* (Swains.) Jard. & Selby, Zool. Journ. ii. 355., Zool. Ill. n. s. pl. 41.
11. T. *cinerascens* (Spix), Av. Bras. t. 46. f. 1.
12. T. *habia* (Less.) Cent. Zool. t. 59.
13. T. *Cuvieri* (Swains.) Swains. Zool. Ill. pl. 32., Spix, Av.

* Established by Vieillot in 1816 (*Analyse, &c.*, p. 39.). *Psaris* of Cuvier (1817), and *Pachyrhynchus* of Spix (1825) are synonymous. This latter name was changed by me in 1838 to *Pachyramphus*.

Bras. t. 45. f. 1., Swains. Nat. Libr. x. 85. pl. 4. — Muscicapa nigriceps *Licht.*; Platyrhynchus Dupontii *Vieill.* — Type of Pachycephalus *Spix*, (1825).

14. T. *viridis* Vieill. Ency. Meth. p. 860., Azara, No. 210.

15. T. *Vieillotii* Jard. & Selby, Ill. Orn. pl. 10. f. 1.

16. T. *Swainsoni* Jard. & Selby, Ill. Orn. Append.

17. T. *pileata* Jard. & Selby, Ill. Orn. pl. 17.

18. T. *ruficeps* Swains. Two Cent. and a Quart. p. 288.

19. T. *rufescens* (Lath.?) Spix, Av. Bras. t. 46. f. 2.

20. T. *castanea* Jard. & Selby, Ill. Orn. pl. 10. f. 2.

21. T. *eques* (Bodd.) Pl. enl. 831. — Muscicapa aurantia *Gmel.*

22. T. *rufa* Vieill. N. Dict. Nat. Hist. iii. p. 347., Azara, No. 208. — Tityra atricapilla *Vieill.* Azara, No. 209.; Lanius validus *Licht.*; Psaris roseicollis *D'Orb.*

23. T. *albifrons* (Swains.) Two Cent. and a Quart. p. 289.

24. T. *megacephala* (Swains.) Two Cent. and a Quart. p. 287.

25. T. *nigra* (Swains.) Zool. Journ. ii. 356., Spix, Av. Bras. t. 45. f. 2.

26. T. *splendens* (Pr. Max.) Beitr. zur Naturg. iii. p. 906. — Pachyrhynchus Spixii *Swains.*

27. T. *variegata* (Spix), Av. Bras. t. 43. f. 2.

28. T. *leucogaster* (Swains.) Two Cent. and a Quart. p. 289.

29. T. *pectoralis* (Swains.) Two Cent. and a Quart. p. 288. — Psaris roseicollis *Jard. & Selby*, Ill. Orn. n. s. pl. 18.

30. T. *Aglaiæ* Lafr. Rev. Zool. 1839. 98.

31. T. *albescens* (Gould), Voy. of Beagle, Birds, p. 50. pl. 16.

32. T. *minima* (Gould), Voy. of Beagle, Birds, p. 51. pl. 15.

33. T. *marginata* (Pr. Max.) Beitr. Nat. iii. 909.

34. T. ———. — Todus marginatus *Licht.* Cat. Dupl. Berl. Mus. p. 51., D'Orb. Voy. dans Amér. Mér. Ois. t. 31. f. 2, 3, 4.

35. T. *mitrata* (Licht.) Cat. Dupl. Berl. Mus. p. 50.

36. T. *brevirostris* (Spix), Av. Bras. t. 15. f. 2.

37. T. *affinis* (Less.) Rev. Zool. 1840. p. 354.

38. T. *tityroides* (Less.) Rev. Zool. 1842. p. 210.

39. T. *rufescens* (Linn.) Pl. enl. 453.

40. T. *versicolor* Hartl. Rev. Zool. 1843. p. 289.

41. T. *citrina* (Pr. Max.) Beitr. iii. p. 917.

42. T. *modesta* (Pr. Max.) Beitr. iii. 922.

43. T. *ruficauda* (Pr. Max.) Beitr. iii. 920.

June, 1846.

C. Hullmandel's Patent Lithotint

TCHITREA
rufa. G.R. Gray.

The fifth Subfamily,

MUSCICAPINÆ, or FLY-CATCHERS,

have the Bill moderate, broad at the base, and narrowing to the tip, which is emarginated, the culmen more or less depressed and curved at the end; the gonys usually long and ascending, and the gape furnished with bristles; the Wings generally long, and more or less pointed; the Tarsi usually short and slender, and the Toes short, with the outer toe longer than the inner one, the hind toe prominent, and the claws moderate, compressed, and acute.

CONOPOPHAGA *Vieill.**

Bill moderate, straight, broad at the base, and rather depressed, with the culmen curved, and the sides compressed to the tip, which is slightly emarginated; the lateral margins straight, and the gonys short, and slightly ascending; the gape furnished with very short bristles; the nostrils basal, lateral, oval, and exposed. *Wings* moderate and rounded, with the third and seventh quills nearly equal and longest. *Tail* very short and rounded. *Tarsi* slender, much longer than the middle toe, and covered in front with broad scales. *Toes* slender and lengthened, with the lateral ones unequal, the outer the longest; the hind toe long, and armed with a strong claw.

The species of this genus are only met with in the thick woods of the tropical parts of America.

1. C. *aurita* (Gmel.) Vieill. Pl. enl. 822. — Pipra leucotis *Gmel.* Gal. des Ois. t. 127.
2. C. *vulgaris* Menetr. Mém. de l'Acad. Petersb. 1835. t. 14. f. 1. — Myiothera lineata *Pr. Max.*
3. C. *dorsalis* Menetr. Mém. de l'Acad. Petersb. 1835. t. 14. f. 2.
4. C. *nigrogenys* Less. Mém. de l'Acad. Petersb. 1835. t. 15. f. 1. — Myiothera perspicillata *Illig.*; Conophaga ruficeps *Swains.* B. of Br. pl. 72, 73., Nat. Libr. Flyc. x. pl. 16.
5. C. *melanogaster* Menetr. Mém. de l'Acad. Petersb. 1835. t. 15. f. 2.
6. C. *nævia* (Gmel.) Vieill. Pl. enl. 823. f. 2.
7. C. *nigrocincta* D'Orb. Voy. dans l'Amér. Mér. Ois. t. 6. f. 3.

PLATYRHYNCHUS *Desm.*†

Bill moderate, straight and broad at the base, with the culmen more or less depressed, and slightly curved to the tip, which is emarginated, the sides compressed, and the lateral margins straight to the tip; the gonys rather long and ascending; the gape furnished with long slender bristles; the nostrils

* It was in 1816 that Vieillot established this genus (*Analyse, &c.* p. 39.). *Myagrus* of M. Boie (1826) and *Myioturdus* of Prince Neuwied are synonymous.

† Desmarest established this genus in 1805 (*Histoire Naturelle des Todiers*). It embraces *Cyclorhynchus* of Sundevall (1835).

basal, lateral, rounded, and exposed. *Wings* moderate, with the third quill nearly as long as the fourth and fifth, which are nearly equal, and longest. *Tail* more or less long, and rounded on the sides. *Tarsi* slender, rather short, longer than the middle toe, and covered in front with scales that are slightly divided. *Toes* rather short, with the outer toe longer than the inner; the hind toe rather long, and armed with a long and slightly curved claw.

The species are confined to the tropical parts of America. They mostly frequent the brushwood which grows among the large trees, though occasionally they are observed on the trees themselves, incessantly moving from branch to branch in search of small insects, which constitute their principal food.

1. P. *rostratus* (Lath.) Desm. — Todus platyrhynchus *Pall.* Spic. vi. t. 3. c.; Platyrhynchus fuscus *Vieill.* Gal. des Ois. t. 126.
2. P. *cancromus* Temm. Pl. col. 21. f. 2., Swains. Nat. Libr. Flyc. x. pl. 17., Swains. Zool. Illustr. pl. 115.
3. P. *marginatus* Licht. Cat. Dupl. Berl. Mus. p. 51.
4. P. *leucoryphus* Pr. Max. Beitr. p. 974.
5. P. *prasinus* (Sparrm.) Mus. Carls. t. 86, 87.
6. P. *striatus* Less. Rev. Zool. 1839. p. 41.
7. P. *nuchalis* Pr. Max. Beitr. p. 97.
8. P. *ferrugineus* (Gmel.).
9. P. *fuscus* (Gmel.) Penn. Gen. Birds, pl. 6. f. 2.
10. P. *gularis* (Gmel.).
11. P. *obscurus* (Gmel.).
12. P. *brachyurus* (Gmel.) Vieill.
13. P. *capensis* A. Smith, Ill. Zool. of S. Afr. Birds, pl. 27.
14. P. *olivaceus* Temm. Pl. col. 21. f. 1. — Platyrhynchus sulfurescens *Spix*, Av. Bras. t. 11. f. 1.; Type of Cyclorhynchus *Sundev.* (1835).
15. P. *flaviventris* (Pr. Max.) Spix, Beitr. Nat. iii. 929., Spix, Av. Bras. t. 15. f. 1.
16. P. *L'herminieri* Less. Rev. Zool. 1839. p. 104.
17. P. *pusillus* Swains. Phil. Mag. 1827. p. 366.

Platysteira *Jard. & Selby.**

Bill more or less long, broad at the base, and depressed, with the culmen straight at the base, and then curved to the tip, which is emarginated and hooked; the lateral margins straight, and the sides compressed to the tip; the gonys long and ascending; the gape furnished with moderate bristles; the nostrils basal, lateral, covered by a membranous scale, partly by the frontal plumes and bristles. *Wings* moderate, with the third quill nearly as long as the fourth to the sixth, which are equal and longest. *Tail* more or less long, and rounded at the end. *Tarsi* longer than the middle toe, and covered in front with broad scales. *Toes* moderate, with the outer toe longer than the inner one, and the hind toe long; the claws moderate, curved, and acute.

The species of this genus are found scattered over the continent of Africa. They reside on the trees that border the rivers, on the slender branches of which they search among the foliage for larvæ and wingless insects. They occasionally quietly seat themselves upon a slender twig and watch the approach of an insect, after which they dart, and having captured it they return to the same twig.

1. P. *melanoptera* (Gmel.) Pl. enl. 567. f. 3. — Muscicapa collaris *Lath.*; Platysteira collaris et P. Desmarestii *Jard. & Selby*, Ill. Orn. pl. 9.; P. lobata *Swains.* B. of W. Afr. ii. p. 49., Nat. Libr. x. Flyc. pl. 22.
2. P. *pistrinasia* (Vieill.) Le Vaill. Ois. d'Afr. t. 160. — Muscicapa molitor *Licht.*; Muscipeta pulsator *Steph.*
3. P. *scita* (Vieill.) Le Vaill. Ois. d'Afr. t. 154. — Platysteira longipes *Swains.* Nat. Libr. Flyc. x. pl. 21.; Muscicapa tenella *Licht.*
4. P. *senegalensis* (Linn.) Pl. enl. 567. f. 1. & f. 2. — Platyrhynchus velatus *Vieill.*

* Established by Sir W. Jardine and Mr. Selby (*Illustr. of Ornith.* with pl. 9.). *Batis* of M. Boie is synonymous.

5. P. *pririt* (Vieill.) Le Vaill. Ois. d'Afr. t. 161. — Muscicapa strepitans *Licht.*
6. P. *castanea* Fras. Proc. Z. S. 1842. p. 141., Zool. Typ. pl.
7. P. *leucopygialis* Fras. Proc. Z. S. 1842. p. 141., Zool. Typ. pl.
8. ? P. *torquata* (Linn.) Pl. enl. 572. f. 2.
9. ? P. *capensis* (Linn.) Pl. enl. 572. f. 1.
10. P. *monacha* (Swains.) Le Vaill. Ois. d'Afr. t. 159.
11. P. *brevicauda* Swains. Nat. Lib. Flyc. x. p. 189.
12. P. *perspicillata* Swains.

Todirostrum *Less.**

Bill more or less lengthened, broad at the base, and much depressed, with the culmen slightly keeled, and sloping towards the tip, which is emarginated; the lateral margins straight, and the side only narrowing in breadth near the tip; the gonys long and ascending; the gape furnished with a few moderate bristles; the nostrils basal, lateral, and placed in a membranous space with the opening somewhat oval. *Wings* moderate, with the first quill long, and the third to the sixth nearly equal and longest. *Tail* short, and rounded on the sides. *Tarsi* long, slender, and covered in front with broad scales. *Toes* rather short, slender, the outer one longer than the inner, and the hind toe long; the claws moderate, curved, and acute.

It is in the densest woods of Brazil, especially those in the neighbourhood of water, that the species are found hopping among the branches and the foliage of the trees, pursuing, says Mr. Swainson, their search to the extreme twig. If its appearance there gives warning to some hapless insect that can fly and the attempt is made, the bird then makes a little saltus or jumping flutter, two or three inches from the branch, and perhaps seizes the insect; but if not, it will still continue its search for others, as if its wings were too feeble to sustain that sudden and vigorous flight which the true fly-catchers can employ when so engaged.

1. T. *cinereum* (Linn.) Less. Edwards's Birds, pl. 262., Desm. Todiers, t. 2., Pl. enl. 585. f. 3. ? — Muscicapa meloxantha *Sparrm.* Mus. Carls. t. 97.
2. T. *maculatum* (Desm.) Less. Desm. Todiers, t.
3. T. *melanocephalum* (Spix), Spix, Av. Bras. t. 9. f. 2., Swains. Nat. Libr. Flyc. x. pl. 18.
4. T. *griseum* (Desm.) Desm. Todiers, t.
5. T. *sylvia* (Desm.) Desm. Todiers, t.
6. T. *plumbeum* (Gmel.).
7. T. *recurvirostrum* Lafr. Rev. Zool. 1842. p. 135.
8. T. *cinereicolle* (Pr. Max.) Beitr. Nat. p. 955. — Todus megacephalus *Swains.* Nat. Libr. Flyc. x. pl. 19.
9. T. *ecaudatum* (D'Orb. & Lafr.) Syn. Av. p. 47., Voy. dans l'Amér. Mér. Ois. t. 33. f. 1.
10. T. *margaritaceiventer* (D'Orb. & Lafr.) Syn. Av. p. 46., Voy. dans l'Amér. Mér. Ois. t. 33. f. 2., Azara, No. 177.
11. T. *gulare* (Natt.) (D'Orb. & Lafr.) Syn. Av. p. 46., Azara, No. 169.
12. T. *orbitatum* (Pr. Max.) Beitr. ii. p. 958.
13. T. *grandense* Hartl. Rev. Zool. 1843. p. 289.
14. T. *platycircus* Swains. Nat. Libr. Flyc. x. p.
15. T. *fruticeps* Lafr. Rev. Zool. 1843. p. 291.

Muscivora *Cuv.*†

Bill more or less long, straight, broad at the base, and narrowing near the tip; the culmen much depressed, straight, and curved at the tip, which is slightly emarginated; the lateral margins straight, the gonys long and ascending; the gape furnished with very long and strong bristles; the nostrils basal,

* M. Lesson established this genus in 1831 (*Tr. d'Ornith.* p. 384.).
† Established by Cuvier between 1799—1800. *Onychorhynchus* of M. Fischer, *Muscipeta* of Cuvier (1817), *Terpsichore* of M. Gloger (1827), and *Megalophus* of Mr. Swainson (1837) are synonymous with the name employed.

lateral, exposed, and suboval. *Wings* long and pointed, with the first quill long, and the third and fourth nearly equal and longest. *Tail* long and nearly even. *Tarsi* the length of the middle toe, and covered by an entire scale. *Toes* moderate, with the outer longer than the inner, the hind toe long, and the claws moderate, curved, and acute.

These birds are found in the forests of the warmer portions of South America.

1. M. *regia* (Gmel.) Pl. enl. 289., Swains. Nat. Libr. Flyc. x. pl. 15., Swains. Ornith. Draw. 51, 52.
2. M. *cristata* (Gmel.) Naturf. xvii. t. 1., Shaw, Nat. Misc. pl. 405.
3. M. *rupestris* (Pr. Max.) Reise, i. p. 345. — Tyrannus bellicosus *Vieill.*; Platyrhynchus hirundinaceus *Spix*, Av. Bras. t. 13. f. 1.

Rhipidura *Vig. & Horsf.**

Bill moderate, broad at the base, and narrowing towards the end, with the culmen rather depressed, and curved to the tip, which is emarginated; the lateral margin straight; the gonys long, and slightly ascending, and the gape furnished with numerous lengthened bristles; the nostrils basal, lateral, and partly covered by the plumes and bristles. *Wings* long and rather pointed, with the first quill short, and the fourth and fifth the longest. *Tail* lengthened, broad, and graduated. *Tarsi* longer than the middle toe, and covered in front with broad scales. *Toes* short, with the outer one longer than the inner, the hind toe long, and the claws moderate, curved, compressed, and acute.

These birds are found in India, its archipelago, New Zealand, and the islands of the Indian Ocean. They are seen in pairs or in small flocks in the open country during the summer months and retire to the underwood of the forests for the cold portion of the year. The change of situation is caused by the nature of their food, which almost entirely consists of small insects. They are active and restless birds, constantly moving from branch to branch in searching for and flying for a short distance after insects on the wing, and they often raise their spread-out tail and lower their wings prior to reseating themselves on a slender branch. While in the air, says Mr. Gould, it (the Australian species) "assumes a number of lively and beautiful positions, at one moment mounting almost perpendicularly, constantly spreading out its tail to the full extent, and frequently tumbling completely over in the descent." The nest is placed on a branch within a few feet of the ground; it is composed of bark of trees, neatly woven together, and lined with soft substances; the eggs are usually two in number.

1. R. *flabellifera* (Gmel.) Lath. Gen. Syn. pl. 49. — Muscicapa ventilabrum *Forst.* Desc. Anim. p. 86., Icon. ined. 155., Voy. au Pole Sud, Ois. t. 11. f. 4.
2. R. *albiscapa* Gould, Proc. Z. S. 1840. p. 113., B. of Austr. pl. — Rhipidura flabellifera *Vig. & Horsf.* Swains. Nat. Libr. Flyc. x. pl. 10.
3. R. *melanura* G. R. Gray, App. Dieff. Trav. N. Zeal. ii. p. 190., Voy. au Pole Sud, Ois. t. 11. f. 5.
4. R. *pectoralis* (Homb. & Jacq.) Voy. au Pole Sud, Ois. t. 11. f. 3.
5. R. *Lessoni* Homb. & Jacq. Voy. au Pole Sud, Ois. t. 11. f. 2.
6. R. *fuliginosa* (Sparrm.) Mus. Carls. t. 47.
7. R. *bicolor* (Sparrm.) Mus. Carls. t. 46.
8. R. *ochracea* (Sparrm.) Mus. Carls. t. 22.
9. R. *albofrontata* Frankl. Proc. Z.S. 1831. p. 116., Jerd. Ill. Ind. Ornith. pl. 2.
10. R. *alba* (Sparrm.) Mus. Carls. t. 76. (a variety).
11. R. *pectoralis* Jerd. Ill. Ind. Orn. p. ., Blyth, J. As. B. 1843. p. 935. — Leucocircus fuscoventris *Jerd.* Madr. Journ. Lit. & Sci.

* The late Mr. Vigors and Dr. Horsfield established this genus in 1825 (*Linn. Trans.* xiii. p. 246.). It is coequal with *Muscylva* of M. Lesson (1831); and embraces *Leucocirca* of Mr. Swainson (1838), *Chelidorynx* of Mr. Hodgson (1845), and probably *Cryptolopha* of Mr. Swainson (1837).

12. R. *fuscoventris* Frankl. Proc. Z. S. 1831. p. 117. — Muscicapa (Muscylva) albogularis *Less.*; M. phœnicura *Kuhl*; R. sannio *Sundev.* ?

13. R. *nigritorquis* Vigors, Proc. Z. S. 1831. p. 97. — Muscicapa bambusæ *Kittl.* Kupfer. Vög. t. 9. f. 2. ?

14. R. *dryas* Gould, Proc. Z. S. 1842. p. 132.

15. R. *isurus* Gould, Proc. Z. S. 1842. p. 174.

16. R. *collaris* Less. Rev. Zool. 1839. p. 103.

17. R. ——— (Homb. & Jacq.) Voy. de l'Astrol. Ois. t. 4. f. 4.

18. R. *atricapilla* (Lath.) Lamb. Icon. ined. ii. 52.

19. R. *rufifrons* (Lath.) Vig. & Horsf. Lewin, B. N. Holl. pl. 18.

20. B. *motacilloides* Vig. & Horsf. Linn. Trans. xv. 248.

21. R. *superciliosa* (Sparrm.) Mus. Carls. t. 96.

22. R. *javanica* (Sparrm.) Mus. Carls. t. 75. — Rhipidura umbellata *Sundev.*

23. R. *laticauda* (Swains.) Nat. Libr. Flyc. pl. 11.

24. R. *perspicillata* (Vieill.) Le Vaill. Ois. d'Afr. t. 152.

25. R. *setosa* (Quoy & Gaim,) Voy. de l'Astrol. Ois. t. 4. f. 4.

26. R. *melanoleuca* (Quoy & Gaim.) Voy. de l'Astrol. Ois. t. 4. f. 3.

27. R. *phœnicura* Müll. & Schl. Verh. Nat. Gesch. Nederl. p. 185.

28. R. *threnathorax* Müll. & Schl. Verh. Nat. Gesch. Nederl. p. 185.

29. R. *rufiventris* Müll. & Schl. Verh. Nat. Gesch. Nederl. p. 185.

30. R. *gularis* Müll. & Schl. Verh. Nat. Gesch. Nederl. p. 185.

31. R. *ochrogastra* Müll. & Schl. Verh. Nat. Gesch. Nederl. p. 185.

32. R. *euryura* Müll. & Schl. Verh. Nat. Gesch. Nederl. p. 185.

33. R. *perlata* Müll. & Schl. Verh. Nat. Gesch. Nederl. p. 185.

34. R. *semicollaris* Müll. & Schl. Verh. Nat. Gesch. Nederl. p. 184.

35. R. *squamata* Müll. & Schl. Verh. Nat. Gesch. Nederl. p. 184.

36. R. *aureola* Less. Tr. d'Orn. p. 390.

37. R. *hypoxantha* (Bl.) — Chelidorynx chrysoschistos *Hodgs.*; Type of Chelidorynx *Hodgs.* (1845).

38. R. *ceylonensis* (Swains.) Zool. Ill. pl. 13. — Cryptolopha poiocephala *Swains.* Nat. Libr. x. pl. 23.; Type of Cryptolopha *Swains.* (1837).

39. R. *auricapilla* (Swains.) Two Cent. and a Quart. p. 343.

40. ? R. *arrogans* (Sundev.) Phys. sellsk. Tidsk. i. 62. — Muscicapa bilineata *Less.*

Tchitrea *Less.**

Bill more or less long, broad, and rather depressed at the base, with the culmen slightly curved, and the sides compressed towards the tip, which is emarginated; the lateral margins nearly straight, and the gonys long and slightly ascending; the gape furnished with long slender bristles; the nostrils basal, lateral, exposed, and rounded. *Wings* long, with the first four quills graduated, and the fourth and fifth equal and longest. *Tail* long and graduated, with the middle feathers sometimes prolonged. *Tarsi* as long as the middle toe, and covered in front with scales that are slightly divided. *Toes* moderate, with the outer longer than the inner toe, and the hind toe long; the claws long, compressed, curved, and acute.

These birds are found in Western and Southern Africa, India, and its archipelago. They frequent forests and even gardens, always selecting the lofty trees, from the highest branches of which they occasionally make a dart after insects on the wing, now and then snapping a caterpillar or some apterous insect off a branch. Their flight is short, generally only from one tree to another, but it is very elegant and rapid. At certain seasons several of the birds may be observed flying after one another, seizing each other by the long feathers of the tail, and not loosing their hold until the feather is broken off, or a portion of it remains in their bill. The nest is formed in a fork of a branch, and is composed of twigs and fibres, in shape of a deep purse open at the top. The eggs are two to four in number.

1. T. *paradisi* (Linn.) Edwards's Birds, pl. 113., Pl. enl. 234. f. 2., Le Vaill. Ois. d'Afr. t. 146. — M. castanea *Temm.* Pl. enl. 234. f. 1., Edwards's Birds, pl. 325., Le Vaill. Ois. d'Afr. t. 144, 145.; Muscipeta indica *Steph.*, Jerd. Ill. Ind. Ornith. pl. 7.

2. T. *mutata* (Gmel.) Pl. enl. 248. f. 2., Le Vaill. Ois. d'Afr. t. 148. — Muscipeta bicolor *Swains.*

3. T. *holosericea* (Temm.) Pl. enl. 248. f. 1., Le Vaill. Ois. d'Afr. t. 147. — Muscicapa mutata var. *Lath.*

4. T. *rufiventris* (Swains.) Birds of W. Afr. pl. 4. — Tchitrea casamansæ *Less.*

5. L. *Gaimardi* Less. Traité d'Ornith. p. 386.

6. T. *senegalensis* Less. Rev. Zool. 1838. p. 278.

* M. Lesson established this genus in 1831 (*Tr. d'Ornith.* p. 386.). It embraces *Philentoma* of Mr. Eyton (1845).

7. T. *borbonica* (Gmel.) Pl. enl. 573. f. 1., Le Vaill. Ois. d'Afr. t. 142, 143. (nest).
8. T. *melanogaster* (Swains.) B. of W. Afr. ii. p. 55.
9. T. *cristata* (Gmel.) Pl. enl. 573. f. 2.
10. T. *leucogaster* Swains. B. of W. Afr. pl.
11. T. *princeps* (Temm.) Pl. col. 584.
12. T. *rufa* G. R. Gray, Ann. Nat. Hist. 1843. p. 371.
13. T. *tricolor* Fr. Proc. Z. S. 1843. p. 4.
14. T. *Ferreti* Guer. Rev. Zool. 1843. p. 162.
15. T. *pyrrhoptera* Temm. Pl. col. 596. f. 2. — Philentoma castaneum *Eyton*; Type of Philentoma *Eyton* (1845).
16. T. *nebulosa* (Vieill.) Le Vaill. Ois. d'Afr. t. 149. — Muscipeta fluvicola *Swains.*
17. T. *torquata* (Gmel.) Le Vaill. Ois. d'Afr. t. 150. — Muscicapa capensis *Kuhl*; Sylvia melanoleuca *Vieill.*; Muscipeta pectoralis *Swains.*
18. T. *atriceps* (Blyth), Journ. A. S. B. 1842. p. 203. & 790.
19. T. *cyanomelas* (Vieill.) Le Vaill. Ois. d'Afr. t. 151. — Muscipeta scapularis *Steph.*
20. T. ? *cæruleocephala* (Quoy & Gaim.) Voy. de l'Astrol. Ois. t. 5. f. 4., Voy. au Pole Sud, Ois. t. 20. f. 2.

Monarcha *Vig. & Horsf.**

Bill long, strong, the base broad, and the culmen slightly depressed, keeled, and curved to the tip, which is emarginated; the sides compressed towards the end; the lateral margins curved, and the gonys long and ascending; the gape furnished with long slender bristles; the nostrils lateral, basal, and concealed by the projecting plumes and bristles. *Wings* moderate, the third quill nearly as long as the fourth, which is the longest. *Tail* long, and slightly emarginated in the middle. *Tarsi* as long as the middle toe, and covered in front with broad scales. *Toes* rather short; the lateral toes unequal, the outer one longer than the inner, and the hind toe moderate: the claws short, curved, and acute.

These birds are found in Australia and the islands of the Indian Ocean.

1. M. *carinata* (Swains.) Vig. & Horsf. Swains. Zool. Ill. pl. 147., Temm. Pl. col. 418. f. 2., Gould, Syn. of Austr. Birds, pl. f. 2. (head). — Muscicapa inornata *Garn. & Less.* Voy. de la Coqu. Ois. t. 16. f. 1., Gould, Syn. of Austr. Birds, pl. f. 3. (head).
2. M. *trivirgata* (Temm.) Pl. col. 418. f. 1., Gould, Syn. of Austr. Birds, pl. f. 1.
3. M. *cinerascens* (Temm.) Pl. col. 430. f. 2.
4. M. *alecto* (Temm.) Pl. col. 430. f. 1.
5. ? M. *velata* (Temm.) Pl. col. 334.
6. M.———? Voy. au Pole Sud, Ois. t. 13.
7. M. *telescophthalma* (Garn. & Less.) Voy. de la Coqu. t. 18. f. 1. — Type of Arses *Less.* (1831).
8. M. *chrysomela* (Garn. & Less.) Swains. Voy. de la Coqu. t. 18. f. 2., Nat. Libr. Flyc. pl. 14.
9. M. *nigra* (Sparr.) Mus. Carls. i. t. 23. — Muscicapa atra *Forst.* Descr. Anim. p. 100.; M. lutea *Gmel.* Forst. Desc. Anim. p. 169., Icon. ined. 156.; M. pomarea *Less.* Voy. de la Coqu. t. 17. f. A. B. C.; M. manpitiensis *Garn.*
10. M. *guttata* (Less. & Garn.) Voy. de la Coqu. Ois. t. 16. f. 2.
11. M. *cæsia* Less. Rev. Zool. 1839. p. 167.

Seisura *Vig. & Horsf.*†

Bill lengthened, rather broad, and depressed at the base, with the culmen straight, but curved at the tip, which is slightly emarginated; the sides gradually compressed to the end, and the gonys very long, and slightly ascending; the gape furnished with short slender bristles; the nostrils basal, lateral, oval, and partly covered by the frontal plumes and bristles. *Wings* very long, with the first three quills graduated, and the fourth and fifth equal and longest. *Tail* long, and rounded on the sides. *Tarsi* short,

* Established by Vigors and Dr. Horsfield in 1825 (*Linn. Trans.* xv. p. 254.). *Drymophila* of M. Temminck is coequal, and it embraces *Arses* of M. Lesson (1831).

† Vigors and Dr. Horsfield established this genus in 1825 (*Linn. Trans.* xv. p. 249.). It embraces *Piezorhynchus* of Mr. Gould (1840).

longer than the middle toe, and covered in front with an almost entire scale. *Toes* moderate, with the outer lateral toe longer than the inner one; the hind toe moderate: the claws rather short, compressed, curved, and acute.

The species of this genus are peculiar to Australia, where they are generally observed in the recently cleared marshy ground or in the densest mangroves and thickets, and are either seen creeping among the fallen trees or on a stump, making various semicircular motions, and at the same time spreading out their tails, uttering loud notes, which Caley compared to the noise of a razor-grinder, when at work. The note of another species has also been remarked by Mr. Gould to be similar to the croak of a frog, but while perched on high branches of trees they utter a rather pleasing succession of sounds resembling *twit te twite*; on the slightest disturbance they immediately descend again to the underwood, and recommence their froglike note. The nest is built among the branches, and it is composed of stringy-bark bound together with vegetable fibres, among which in some instances cobwebs are mixed; sometimes small pieces of thin bark are attached, some of them hanging by a single thread, and moving about with every breath of air. The eggs are two in number.

1. S. *inquieta* (Lath.) G. R. Gray, Lamb. Icon. ined. ii. 51. — Turdus dubius *Lath.* Lamb. Icon. ined. ii. 67.; T. muscicola *Lath.* Lamb. Icon. ined. ii. 49.; Seisura volitans *Vig. & Horsf.* Swains. Nat. Libr. Flyc. x. pl. 12.

2. S. *volitans* (Lath.) G. R. Gray, Lamb. Icon. ined. i. 59.

3. S. *nitida* (Gould), Proc. Z. S. 1840. p. 171., B. of Austr. pl.; Type of Piezorhynchus *Gould* (1840).

Myiagra *Vig. & Horsf.**

Bill moderate, straight, more or less broad, and much depressed at the base, with the sides gradually compressed, and the culmen slightly curved to the tip, which is emarginated; the gonys very long and ascending; the gape furnished with numerous short bristles; the nostrils basal, rounded, and partly hidden by the frontal plumes. *Wings* long, with the first quill very short, and the fourth and fifth equal and longest. *Tail* long, broad, and even. *Tarsi* short, longer than the middle toe, and covered with broad transverse scales. *Toes* short, with the outer toe longer than the inner; the hind toe moderate: the claws short, compressed, and curved.

The species inhabit the thick bushes that border the lagoons and ponds of Australia and India. They are seen flitting from branch to branch, and occasionally darting after insects on the wing, pursuing those only which approach within two or three feet, scarcely remaining in the same position for more than a few seconds, and then resuming their flight.

1. M. *rubecula* (Lath.) G. R. Gray, Lamb. Icon. ined. ii. 44. — Platyrhynchus ruficollis et P. rubecula *Vieill.*; Myiagra rubeculoides *Vig. & Horsf.*

2. M. *plumbea* Vig. et Horsf. Linn. Trans. xv. p. 254.

3. M. *flavipes* Swains. Nat. Libr. Flyc. x. p. 255.

4. M. *latirostris* Swains. Nat. Libr. Flyc. x. p. 255.

5. M. ———.— Myiagra latirostris *Gould*, Proc. Z. S. 1840. p. 172., Voy. au Pole Sud, Ois. t. 12. bis, f. 1, 2.?

6. M. *nitida* Gould, Proc. Z. S. 1837. p. 142.

7. M. *fasciñans* (Lath.) Lamb. Icon. ined. i. 58. — Sylvia leucophæa *Lath.* Lamb. Icon. ined. iii. 28.; Myiagra macroptera *Vig. & Horsf.*; Type of Micræca *Gould* (1840).

8. M. *assimilis* (Gould), Proc. Z. S. 1840. p. 172.

9. M. *flavigaster* (Gould), Proc. Z. S. 1842. p. 132.

10. M. *azurea* (Bodd.) Pl. enl. 666. f. 1. — Muscicapa cærulea *Gmel.* Le Vaill. Ois. d'Afr. t. 153.; M. occipitalis *Vigors*; M. cæruleocephala *Sykes*,. Kittl. Kupf. Vögel. t. 9. f. 1.

11. M. ——— ? (Homb. & Jacq.) Voy. au Pole Sud, Ois. t. 12. bis, f. 3.

12. M. ——— ? (Homb. & Jacq.) Voy. au Pole Sud, Ois. t. 12. bis. f. 4.

13. M. *longicauda* Swains. Nat. Libr. Flyc. x. pl. 25.

14. M. *torquata* Swains. Nat. Libr. Flyc. x. p. 208.

* Established by Vigors and Dr. Horsfield in 1825 (*Linn. Trans.* xv. p. 250.). *Hypothimis* of M. Boie (1828) is synonymous. It embraces *Micræca* of Mr. Gould (1840).

Hemichelidon *Hodgs.**

Bill moderate, very broad, and much depressed at the base, with the sides suddenly compressed, and the culmen slightly curved towards the tip, which is scarcely emarginated; the gonys short and ascending; the gape furnished with a few short slender bristles; the nostrils basal, rounded, and partly covered by the bristles. *Wings* long, with the first quill very small, and the third the longest. *Tarsi* short, as long as the middle toe, slender, and covered by a single scale. *Toes* short and slender, with the lateral ones unequal, the outer toe the longest; the hind toe moderate: the claws rather short, curved, and acute.

According to Mr. Hodgson, these birds are only found in the hills of the central regions of Nepal; they dwell in woods, and have the general manners of the fly-catchers, but with a bolder and more continuous flight.

1. H. *fuliginosa* Hodgs. Ann. Nat. Hist. 1845. p. 203.
2. H. *ferruginea* Hodgs. Ann. Nat. Hist. 1845. p. 203.
3. H. ? *latirostris* (Raffl.) Linn. Trans. xiii. p. 263.

Muscicapa *Linn.*†

Bill rather short, broad at the base, and the sides much compressed to the end, with the culmen much depressed, and slightly curved to the tip, which is emarginated; the gonys long and ascending; the gape furnished with bristles; the nostrils basal, lateral, and partly concealed by the frontal plumes. *Wings* moderate, and rather pointed; with the first quill very short, the second rather shorter than the third and fourth, which are equal and longest. *Tail* moderate and even. *Tarsi* nearly the length of the middle toe, and covered in front. *Toes* short; the lateral ones nearly equal, the inner the shortest; the hind toe long: the claws long, curved, and acute.

These birds are found in most parts of the old continent. They appear in the temperate regions during the winter, and retire to the colder places on the approach of summer, mostly frequenting the wooded districts or cultivated places, gardens, and orchards. Their food consists entirely of small insects, which they take on the wing when they approach within a certain range of them while seated on the top of a decayed branch or post, &c. The nest is formed in the forks of branches or in the holes of trees; it is composed of leaves, moss, or hay, and small twigs, lined with hair and feathers. The females lay from four to five eggs.

1. M. *grisola* Linn. Pl. enl. 565. f. 1., Gould, B. of Eur. pl. 65.
2. M. *atricapilla* Linn. — Emberiza luctuosa *Scop.* Gould, B. of Eur. pl. 63. f. 1., Edwards's Birds, pl. 30. f. 1, 2.; Motacilla ficedula *Gmel.*; Muscicapa muscipeta *Bechst.* Pl. enl. 668. f. 1.; Type of Butalis *Boie* (1826).
3. M. *albicollis* Temm. Man. d'Orn. p. 153., Gould, B. of Eur. pl. 63. f. 2. — Muscicapa collaris *Bechst.*; M. streptophora *Vieill.*
4. M. *parva* Bechst. Naturg. Deutschl. iii. p. 442., Gould, B. of Eur. pl. 64.; Type of Erythrosterna *Pr. Bonap.* (1838).
5. M. *hylocharis* Temm. & Schl. Faun. Japon. t. 17.

* Established by Mr. Hodgson in 1845 (*Ann. of Nat. Hist.* 1845. p. 203.).

† Established by Linnæus in 1766. *Ficedula* of Brisson (1760) is synonymous. It embraces *Butalis* of M. Boie (1826), and *Erythrosterna* of the Prince of Canino (1838), as well as *Muscicapula* Blyth (1843), and probably *Hyliota* of Mr. Swainson (1827).

6. M. *gularis* Temm. & Schl. Faun. Japon. t. 16.
7. M. *cinereo-alba* Temm. & Schl. Faun. Japon. t. 15.
8. M. *fumigata* Guer. Rev. Zool. 1843. p. 161.
9. M. *Fraseri* Strickl. Ann. Nat. Hist. xv. p. 128.
10. M. *albifrons* Sparrm. Mus. Carls. t. 24.
11. M. *semipartita* Rüpp. Faun. Abyss. t. 40. f. 1.
12. M. *chocolatina* Rüpp. Syst. Uebers, t. 20.
13. M. *muginaki* Temm. Pl. col. 577. f. 2.
14. M. *narcissina* Temm. Pl. col. 577. f. 1.
15. M. *sandwichensis* Gmel. Ellis, Icon. ined. 87. ?
16. M. *obscura* Gmel.
17. M. *maculata* Gmel.
18. M. *rufiventris* Gmel. Pl. enl. 572. f. 3.
19. M. *picata* Sykes, Proc. Z. S. 1832. p. 85.
20. M. *poonensis* Sykes, P. Z. S. 1832. p. 85.
21. M. *capitalis* M'Clell. P. Z. S. 1839. p. 157.
22. M. *rugensis* Homb. & Jacq. Ann. Sci. Nat. 1841. p. 312.
23. M. ——— Le Vaill. Ois. d'Afr. t. 156.
24. M. *stellata* Vieill. Le Vaill. Ois. d'Afr. t. 157.
25. M. *cæruleocephala* Scop. Soun. Voy. t. 26. f. 1.
26. M. *platyrhyncha* Quoy & Gaim. Voy. de l'Astrol. Ois. t. 11. f. 1. (Myiagra ?)
27. M. *manadensis* Quoy & Gaim. Voy. de l'Astrol. Ois. t. 3. f. 3.
28. M. ? *megarhyncha* Quoy & Gaim. Voy. de l'Astrol. Ois. t. 3. f. 1.
29. M. *vanikorensis* Quoy & Gaim. Voy. de l'Astrol. Ois. t. 5. f. 1.
30. M. *chalybeocephala* Garn. & Less. Voy. de la Coqu. Ois. t. 16. f. 1.
31. M. *enado* Garn. & Less. Voy. de la Coqu. Ois. t. 15. f. 2.
32. M. *griseocapilla* Vieill. N. Dict. d'Hist. Nat, xxi. p. 489.
33. M. *saphira* Tick. — Type of Muscicapula *Blyth* (1843).
34. M. *superciliaris* Jerd. Madr. Journ. Lit. & Sci. xi. p. 16. — Dimorpha albogularis *Blyth*.
35. M. *melanoleuca* Hodgs. Journ. A. S. B. 1843. p. 940.
36. M. *rubecula* Blyth. — Dimorpha superciliaris *Blyth*, Journ. A. S. B. 1843. p. 940.
37. M. *tectec* Gmel. Briss. ii. t. 39. f. 1.
38. M. *madagascariensis* Gmel. Briss. iii. t. 24. f. 5.
39. M. *melanictera* Gmel. Brown, Ill. pl. 82.
40. M. *fuscescens* Gmel.
41. M. *philippensis* Gmel.
42. M. *cochinsinensis* Lath.
43. M. *variegata* Linn.
44. M. *cambaiensis* Lath.
45. M. *undulata* Gmel.
46. M. *leucura* Gmel.
47. M. *caledonica* Gmel.
48. M. *nævia* Gmel. Forst. Descr. p. 269., Icon. ined. t. 159.
49. M. *flavifrons* Gmel.
50. M. *passerina* Lath.
51. M. *nigrifrons* Gmel.
52. M. *comata* Gmel.
53. M. *cinnamomea* Linn.
54. M. *pondiceriana* Gmel.
55. M. *sinensis* Gmel.
56. M. *nitens* Gmel.
57. M. *nitida* Lath.
58. M. *grisea* Gmel.
59. M. *flavicollis* Gmel.
60. M. *tricolor* Vieill. N. Dict. d'Hist. Nat. xxi. p. 490.
61. M. *albicollis* (Vieill.) N. Dict. d'Hist. Nat. xxvii. p. 13.
62. M. *ruficauda* Swains. Nat. Libr. Flyc. p. 251.
63. M. *latirostris* Swains. Nat. Libr. Flyc. p. 253.
64. M. ——— ? M. leucura *Swains.* Nat. Libr. Flyc. p. 253.
65. M. *picata* Swains. Nat. Libr. Flyc. p. 254.
66. M. *melanoleuca* (Vieill.) Ency. Méth. p. 835.
67. M. *musica* (Vieill.) N. Dict. d'Hist. Nat. xxvii. p. 15.
68. M. *polychoptera* (Vieill.) N. Dict. d'Hist. Nat. xxvii. p. 10.
69. M. *flavigaster* (Swains.) Nat. Libr. x. Flyc. pl. 23.; Type of Hyliota *Swains.* (1827).

Niltava *Hodgs.**

Bill short, straight, broad at the base, and narrowing to the tip, which is emarginated; the lateral margins straight, with the culmen suddenly curved at the end, and the gonys long and ascending; the gape furnished with short bristles; the nostrils basal, lateral, rounded, and partly covered by the frontal plumes and bristles. *Wings* long, with the first quill half the length of the second, which, with the third, are graduated, and the fourth and fifth equal and longest. *Tail* moderate, broad, and nearly even. *Tarsi* as long as, or shorter than, the middle toe, slender, and covered with an almost entire scale. *Toes* long, slender; the outer toe longer than the inner; the hind toe moderate: the claws moderate, curved, and acute.

* Established by Mr. Hodgson in 1837 (*Indian Review*, 1837, p. 651.). This word was changed by him to *Chaitaris* in 1841. It embraces *Siphia* of Mr. Hodgson (1837), which he changed to *Dimorpha* in 1841, also *Cynornis* of Mr. Blyth (1843).

It is in various parts of India and its archipelago that these birds are found. They are observed in wooded districts and gardens generally singly or in pairs, sitting upright upon the shady branches of trees or occasionally in exposed places, as on a post or dead branch, waiting the approach of small insects, which, when within a few feet, they pursue and take upon the wing, often returning to the same branch or to a neighbouring station. The food entirely consists of small insects, which, when scarce, occasions them to migrate to a fresh locality.

1. N. *sundara* Hodgs. Ind. Rev. 1837. p. 651.
2. N. *Macgregorii* (Burt.) Proc. Z. S. 1835. p. 152. — Niltava fuligiventer *Hodgs.*
3. N. *grandis* (Blyth), Journ. A. S. B. 1842. p. 189.
4. N. *rubeculoides* (Vigors), Proc. Z. S. 1831. p. 35. — Niltava brevipes *Hodgs.*; Type of Cynornis *Blyth* (1843).
5. N. *banyumas* (Horsf.) Linn. Trans. xiii. p. 146. Zool. Res. in Java, pl. — Muscicapa cantatrix *Temm.* Pl. col. 226.; M. rubecula *Swains.* Libr. Flyc. x. pl. 27.; M. Tytlerii *James*; M. rufigaster *Raffl.*; M. cyanea *Vieill.*
6. N. *Tickellii* (Blyth). — Muscicapa hyacintha *Tick.* Journ. A. S. B. ii. 574.
7. N. *unicolor* (Blyth), Journ. A. S. B. 1843. p. 1007.
8. N. *nigrorufa* (Jerd.) Madr. Journ. Lit. & Sci. 1842. p. 189.
9. N. *rufula* (Lafr.) Rev. Zool. 1840. p. 66.
10. N. *hyacintha* (Temm.) Pl. col. 30.
11. N. *elegans* (Temm.) Pl. col. 596. f. 2.
12. N. *indigo* (Horsf.) Linn. Trans. xiii. p. 146. Zool. Res. in Java, pl. — Platyrhynchus cyanoleucus *Vieill.*
13. N. *pallipes* (Jerd.) Madr. Journ. Lit. & Sci. 1840. p. 15. — Muscicapa indigo *Horsf.?*
14. N. *melanops* (Vigors), Proc. Z. S. 1831. p. 171. Gould, Cent. of B. pl. — Muscicapa thalassina *Swains.*; M. lapis *Less.*
15. N. *albicaudata* (Jerd.) Madr. Journ. Lit. & Sci. 1840. p. 16. — Muscicapa thalassina *Swains.?*
16. N. *azurea* (Vieill.) N. Dict d'Hist. Nat. xxi. p. 463. Le Vaill. Ois. d'Afr. pl. 158.
17. N. *cyanomelana* (Temm.) Pl. enl. 470.
18. N. *strophiata* (Hodgs.) Indian Rev. 1837. — Type of Siphia *Hodgs.* (1837).
19. N. *auricularis* (Hodgs.) Journ. A. S. B. 1843. p. 940.
20. N. *plumosa* (Blyth), Journ. A. S. B. 1842. p. 791.

SETOPHAGA *Swains.**

Bill moderate, broad, and depressed at the base, with the culmen slightly curved, and the sides gradually compressed to the tip, which is slightly emarginated; the gonys long and ascending; the gape furnished with short bristles; the nostrils basal, oval, and partly covered by the bristles. *Wings* long and pointed, with the first quill slightly shorter than the second and third, which are the longest. *Tail* long, broad, and nearly even. *Tarsi* rather longer than the middle toe, and covered with broad scales. *Toes* long, with the outer longer than the inner; the hind toe long: the claws long, curved, and acute.

It is in North and South America that the species are found. They inhabit the forests, borders of swamps and meadows. Wilson, in speaking of the North American species, says, it is almost perpetually in motion; and will pursue a retreating party of flies from the tops of the tallest trees in an almost perpendicular, but zigzag direction to the ground, while the clicking of its bill is distinctly heard; and it probably secures ten or twelve of these in a descent of three or four seconds. It then alights on an adjoining branch, traverses it lengthwise for a few moments, flitting its expanded tail from side to side, and suddenly shoots off in a direction quite unexpected after fresh game, which it can discover at a great distance. The nest is frequently built in low bushes, in the fork of a small sapling, or on the drooping branches of the elm, within a few feet of the ground; outwardly it is formed of flax well wound together, and moistened with saliva interspersed here and there with pieces of lichen, and lined with a very soft downy substance.

* Mr. Swainson established this genus in 1827 (*Zoological Journal*, iii. p. 360.). *Sylvania* of Mr. Nuttall (1832) is synonymous.

1. S. *ruticilla* (Gmel.) Swains. Wils. Am. Orn. pl. 6. f. 6 — Muscicapa flavicauda *Gmel.* Edwards's Birds, pl. 257., Audub. B. of Amer. pl. 40., Swains, B. of Beng. pl. 71.

2. S. *picta* Swains. Zool. Illustr. n. s. pl. 3.

3. S. *rubra* Swains. Phil. Mag. 1827. p. 368.— Setophaga miniata *Lafr.* Mag. de Zool. 1836. t. 54.

4. S. *vulnerata* (Wagl.) Isis, 1831. p. 520. — Setophaga castanea *Less.*

5. *S. flaveola* Lafr. Rev. Zool. 1840. p. 81.

6. S. *ornata* Boiss. Rev. Zool. 1840. p. 70.

7. S. *nigrocincta* Lafr. Rev. Zool. 1843. p. 292.

8. S. ——. Setophaga miniata *Swains.* Two Cent. and a Quart. p. 293.

9. S. *aurocapilla* Swains. Two Cent. and a Quart. p. 293.

10. S. *rufifrons* Swains. Two Cent. and a Quart. p. 294.

11. S. *canadensis* (Linn.) Swains. Wils. Amer. Orn. pl. 26. f. 2. — Sylvia pardalina *Pr. Bonap.* Audub. B. of Amer. pl. 103.

12. S. *mitrata* (Lath.) Hartl. Wils. Amer. Orn. pl. 26. f. 3. — Muscicapa cucullata *Wils.* Audub. B. of Amer. pl. 90. ; M. Selbyi *Audub.* B. of Amer pl. 9. ; Type of Myiodioctes *Audub.* (1839.)

13. S. *brunniceps* D'Orb. & Lafr. Syn. Av. p. 50., Voy. dans l'Amér. Mér. Ois. t. 34. f. 3.

14. S. *verticalis* D'Orb. & Lafr. Syn. Av. p. 50., Voy. dans l'Amér. Mér. Ois. t. 35. f. 1.

15. S. *melanocephala* Tschudi, Faun. Peruana, p. 16.

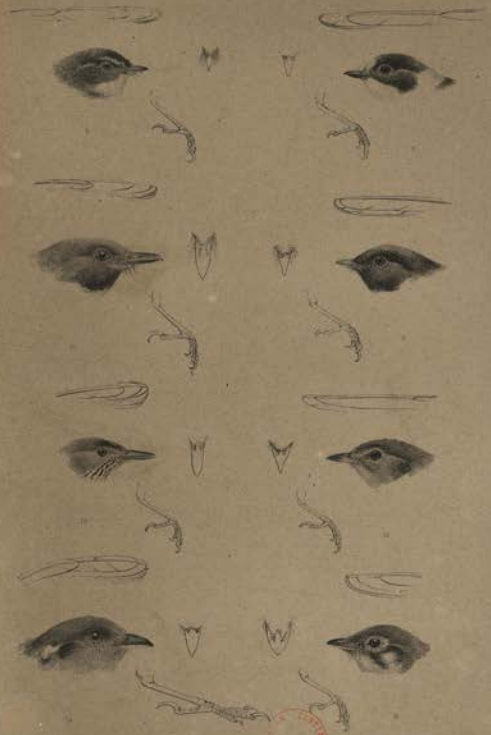
16. S. *chrysogaster* Tschudi, Faun. Peruana, p. 16.

17. S. *olivater* (Less.) Tr. d'Orn. p. 392.

August, 1846.

Hullmandel & Walton Lithographers

VIREO
virescens Vieill.



The sixth Subfamily,

VIREONINÆ, or GREENLETS,

have the Bill rather short and straight, with the culmen slightly curved, and the sides compressed to the tip, which is curved and emarginated; the gonys long and ascending; the gape furnished with short weak bristles; the Nostrils rounded and exposed: the Wings rather long and pointed: the Tail moderate: the Tarsi moderate, and covered with broad scales: the Toes moderate, the lateral ones equal, and united at the base, especially the outer.

VIREO *Vieill.**

Bill rather short, strong, and straight, with the culmen slightly curved, and the sides much compressed to the tip, which is curved and emarginated; the gonys long and ascending; the gape furnished with short weak bristles; the nostrils basal, and placed in a short broad groove, with the opening rounded and exposed. *Wings* more or less long and pointed; with the second, third, and fourth (and sometimes only the third and fourth) quills the longest. *Tail* moderate and even. *Tarsi* longer than the middle toe, and covered in front with broad scales. *Toes* moderate; the outer toe longer than the inner, but both united at the base, especially the outer; the hind toe long; the claws moderate, curved, and acute.

The species of this genus are found in various parts of America and the West Indies; being observed in particular localities at certain periods of the year. They are very lively birds, seeking amongst the leaves of the trees for their food, which consists of insects, both in the larva and perfect state; while so engaged, they often pour forth a sprightly song of a few notes. The nest is small, sometimes pendulous between two twigs within a few feet of the ground. It is composed of fragments of withered leaves, vine bark, flax, and other materials, all glued together with the saliva of the birds, and with the silk of caterpillars; so firmly are these put together, that they resist the effect of the weather. Those of some species are placed on the upper side of a limb, or sometimes on a horizontal branch among the twigs, and are also made of various vegetable substances. The eggs are usually four or five in number.

1. V. *noveboracensis* (Gmel.) Pr. Bonap. — Vireo musicus *Vieill.* Ois. d'Amér. Septr. t. 52.; Muscicapa cantatrix *Wils.* Amer. Orn. pl. 18. f. 6., Audub. B. of Amer. pl. 63.
2. V. *Bellii* Audub. B. of Amer. 2nd edit. pl. 485.
3. V. *flavifrons* (Gmel.) Vieill. Ois. d'Amér. Septr. t. 54. — Muscicapa sylvicola *Wils.* Amer. Orn. pl. 7. f. 3., Audub. B. of Amer. pl. 119.
4. V. *solitarius* (Wils.) Vieill. Amer. Orn. pl. 17. f. 6., Audub. B. of Amer. pl 28.
5. V. *olivaceus* (Linn.) Catesby, Carol. pl. 54., Wils. Amer.

* Established by Vieillot in 1807 (*Ois. de l'Amér. Septr.* i. p. 83.). It embraces *Vireosylvia* of the Prince of Canino (1838).

Orn. pl. 12. f. 3., Audub. B. of Amer. pl. 150. — Type of Vireosylvia *Pr. Bonap.*

6. V. *virescens* Vieill. Ois. d'Amér. Sept. t. 53. — Lanius olivaceus *Licht.*; Vireo Bartrami *Swains.* Faun. Bor. Amer. ii. p. 235., Audub. B. of Amer. pl. 415.

7. V. *altiloquus* (Vieill.) Ois. d'Amér. Sept. t. 38. — Vireo longirostris *Swains.* Faun. Bor. Amer. ii. p. 237.; V. olivaceus *Gosse*, Edwards's Birds, pl. 253.

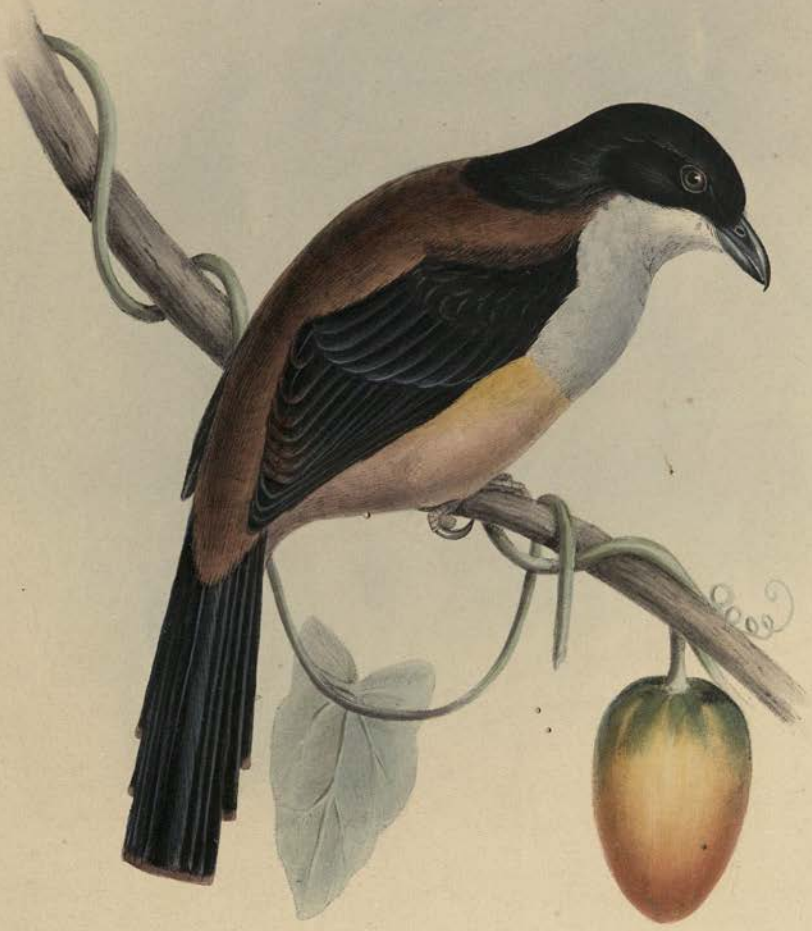
8. V.? *virens* (Bodd.) Pl. enl. 273. f. 1. — Turdus hispaniolensis *Gmel.*

9. V.? ——? Pl. enl. 558. f. 2. — Turdus hispaniolensis var. β *Lath.*

10. V. *gilvus* (Vieill.) Ois. d'Amér. Septr. t. 34. — Muscicapa melodia *Wils.* Amer. Orn. pl. 42. f. 2., Audub. B. of Am. pl. 118.

11. V. *agilis* (Licht.) Hartl. Pr. Max. Beitr. iii. p. 796. — Sylvia chiwi *Vieill.* Spix, Av. Bras. t. 34. f. 1.

June, 1848.



PTERUTHIUS
rufiventris Blyth.

1 EOPSALTRIA australis. 2 LEIOTHRIX sinensis. 3 PTERUTHIUS erythropterus.
4 PACHYCEPHALA gutturalis. 5 PTILOCHLORIS arcuatus. 6 PARDALOTUS punctatus.
7 CALYPTURA cristata.

C.Hullmandel's Patent Lithotint

The fourth Family,

AMPELIDÆ, or CHATTERERS,

have the Bill moderate, more or less broad at the base, and more or less depressed, with the sides gradually compressed to the tip, which is emarginated; the Wings long and generally rounded; the Tail moderate, and usually even at its end; the Tarsi generally short and slender; the Toes moderate, with the outer more or less united to the base of the middle; the Claws short and curved.

The first Subfamily,

PACHYCEPHALINÆ, or THICKHEADS,

have the Bill moderate, broad at the base, and compressed to the tip, which is emarginated; the gape furnished with a few slender bristles; the Wings moderate, and more or less rounded; the Tarsi lengthened and slender; the Toes long, with the outer one slightly united at the base to the middle one; the claws short and curved.

LEIOTHRIX *Swains.**

Bill equal to, or scarcely shorter than, the head, with the culmen gradually curved to the tip, which is emarginated; the sides compressed; the lateral margins slightly curved; the gonys lengthened and advancing upwards; the nostrils basal, lateral, membranous, with the opening sublunate. *Wings* moderate and rounded, with the first four quills graduated, and the fifth and sixth nearly equal and longest. *Tail* moderate and forked, or square, or more or less rounded at the end. *Tarsi* slender, much longer than the middle toe, and covered with lengthened scales. *Toes* long, with the lateral ones unequal, the outer the longest, and united at its base to the middle one; the hind toe nearly as long as the middle toe; the claws moderate and curved.

These birds are inhabitants of the mountainous parts of India and the Indian isles. Mr. Hodgson informs us that they are gregarious, adhere to the forest, creeping among foliage, or perch like finches on the stems and tops of large weeds and grasses. Their food consists almost equally of insects, berries, and seeds.

1. L. *sinensis* (Gmel.) Strickl. — Parus furcatus *Temm.* Pl. col. 287. f. 1.; Bahila calipyga *Hodgs.*
2. L. *ignotincta* (Hodgs.) Ind. Rev. 1838. p. 32.— Leiothrix ornata *M'Clell.* Proc. Z. S. 1829. 162.; Type of Minla *Hodgs.* (1838.)
3. L. *cyanouroptera* (Hodgs.) Ind. Rev. 1838. p. 88.— Leiothrix lepida *M'Clell.* Proc. Z. S. 1839. 162.; Type of Siva *Hodgs.* 1838.
4. L. *strigula* (Hodgs.) Ind. Rev. 1838. p. 89.—Muscicapa variegata *Deless.* Rev. Zool. 1840, p. 101., Mag. de Zool. 1840., Ois. t. 20. Souv. d'un Voy. dans l'Inde. t. 8.; Leiothrix chrysocephala *Jameis.*
5. L. *nipalensis* (Hodgs.) Ind. Rev. 1838. p. 89.
6. L. *vinipectus* (Hodgs.) Ind. Rev. 1838. p. 89.
7. L. *argentauris* (Hodgs.) Ind. Rev. 1838. p. 88. — Type of Mesia *Hodgs.*
8. L. *castaneceps* (Hodgs.) Ind. Rev. 1838. p. 33.

* Established by Mr. Swainson (*Faun. Bor. Amer.* p. 490.) in 1831. In 1838, Mr. Hodgson proposed four divisions for the birds of this genus, viz. *Bahila*, *Minla*, *Mesia*, and *Siva*. These, in 1841, were changed by the same gentleman into *Calipyga*, *Proparus*, *Philocalyx*, and *Hemiparus*; and, in 1844, he employed, in his *List of Nepaul Birds*, the following words in their places, viz. *Leiothrix*, *Certhiparus*, *Fringilloparus*, and *Joropus*.

PTERUTHIUS *Swains.**

Bill short, with the culmen arched to the tip, which is strongly emarginated; the base broad, and the sides compressed; the lateral margins slightly arched; the gonys of the lower mandible large and curved upwards; the nostrils basal, lateral, and membranous, with the opening rounded. *Wings* very short and rounded, with the fourth quill the longest. *Tail* short, broad, and rounded. *Tarsi* long, longer than the middle toe, and covered with nearly obsolete scales. *Toes* long, with the lateral ones unequal; the outer the longest, and united at its base to the middle one; the hind toe as long as the middle one without the claw; the claws long and curved.

It is in India and its archipelago that these birds are found, but their manners and habits have not yet been noticed by any naturalist.

1. P. *erythropterus* (Vigors), Swains. Gould's Cent. of Birds, pl. 11.
2. P. *flaviscapis* (Temm.) Pl. col. 589. f. 1. — Type of Allotrius *Boie* (1835).
3. P. *ænobarbus* (Temm.) Pl. col. 589. f. 2.
4. P. *rufiventer* Blyth, Journ. As. Soc. Beng. 1842. 183. & 1843. 954.
5. P. *virecides* (Jerd.) Journ. As. Soc. Beng. 1840. 8.

PARDALOTUS *Vieill.*†

Bill very short, rather broad at the base, with the culmen much arched to the tip, which is strongly emarginated; the sides gradually compressed towards the tip; the gonys of the lower mandible large and ascending; the nostrils basal, lateral, and covered by a membrane. *Wings* long and pointed, with the first three quills nearly equal and longest. *Tail* moderate, and nearly even at the end. *Tarsi* slender, and much longer than the middle toe. *Toes* moderate, slender, with the lateral ones equal; the outer united at the base to the middle one; the hind toe longer than the lateral ones; the claws moderate and curved.

These showily marked birds are continually engaged in searching for insects among the foliage of the trees and shrubs of Australia, whether near the habitations of man or in the open forest. They are active in their manners, prying both above and below the leaves with the greatest ease. Their flight, in passing from tree to tree, is quick and darting. Seeds, buds, and insects form the object of their search. Their nests are, according to Mr. Gould, generally placed in holes of trees; yet the typical species excavates a hole just large enough to admit of the passage of its body, in a nearly horizontal direction, to the depth of two or three feet, at the end of which a chamber is formed, in which the nest is deposited. The nest itself is a neat and beautifully built structure formed of strips of the inner bark of the *Eucalypti*, and lined with finer strips of the same or similar material. The eggs are generally from three to five in number.

1. P. *punctatus* (Lath.) Vieill. Shaw's Nat. Misc. pl. 111., Pl. col. 78., Gould's Syn. of Austr. B. pl. f. 1. (head), B. of Austr. pl.; P. australis *Steph.*?
2. P. *affinis* Gould, Lath. Syn. pl. 54., Gould's Syn. of Austr. B. pl. f. 2., B. of Austr. pl.
3. P. *striatus* (Lath.) Temm. Shaw's Nat. Misc. pl. 174., Gould's Syn. of Austr. B. pl. f. 3. — Pardalotus ornatus *Temm.* Pl. col. 394. f. 1., Gould's B. of Austr. pl.
4. P. *quadrigintus* Gould, Proc. Z. S. 1837. p. 148., Syn. of Austr. B. pl. f. 1., B. of Austr. pl.
5. P. *melanocephalus* Gould, Proc. Z. S. 1837. p. 149., Syn. of Austr. B. pl. f. 2.
6. P. *rubricatus* Gould, Proc. Z. S. 1837. p. 149., Syn. of Austr. B. pl. f. 3.
7. P. *uropygialis* Gould, Proc. Z. S. 1837. p. 148., B. of Austr. pl.
8. P. *superciliosus* (Lath.) Vieill. Lamb. Icon. ined. iii. t. 4.
9. P. *cærulescens* (Lath.) Lamb. Icon. ined. iii. t. 40. — Pipra cærulea *Vieill.*

* Established by Mr. Swainson (*Faun. Bor. Amer.* p. 491.) in 1831. In 1835, M. Boie proposed this division as *Allotrius*.
† Established by Vieillot (*Analyse, &c.* p. 31.) in 1816.

Calyptura *Swains.**

Bill short, with the culmen much arched to the tip, which is emarginated; the base broad, and the sides gradually compressed; the gonys lengthened and advancing upwards; the nostrils basal, lateral, and rounded. *Wings* short and rounded, with the third, fourth, and fifth quills the longest. *Tail* remarkably small, and even at its end. *Tarsi* lengthened and slender, and longer than the middle toe. *Toes* moderate and slender, with the inner shorter than the outer, which is united at the base to the middle toe; the hind toe long, and nearly the length of the middle one; the claws moderate and much curved.

The type of this division is peculiar to Brazil; and its habits and manners are unknown.

C. *cristata* (Vieill.) Swains. Ornith. Draw. 24. — Regulus tyrannulus *Licht.*

Pachycephala *Swains.*†

Bill moderate, the base somewhat broad, and the sides compressed, with the culmen arched to the tip, which is emarginated; the gonys lengthened and ascending; the nostrils basal, lateral, and partly covered by a membrane, with the opening rounded. *Wings* moderate, with the first three quills graduated, and the fourth and fifth nearly equal and longest. *Tail* moderate, with the end nearly even, or scarcely forked. *Tarsi* moderate, rather longer than the middle toe, and covered with long scales. *Toes* moderate and slender, with the lateral ones unequal; the outer the longest, and united at its base to the middle toe; the hind toe as long as the outer; the claws moderate and curved.

Most of the birds of this genus are peculiar to Australia, others are found in New Guinea, and the isles of the South Seas. They are generally observed solitary, or in pairs, creeping and hopping among the foliage of the upper parts of the lofty trees of the thick forests, or in the shrubs. Their food consists of berries and the larvæ of insects, &c. The nest is formed on the small horizontal branches of large trees, or in shrubs, of fine twigs and fibrous roots. The eggs are generally three or more in number.

1. P. *gutturalis* (Lath.) Vigors & Horsf. Le Vaill. Ois. d'Afr. t. 115., Lewin's B. of N. Holl. pl. 10. — Turdus dumularis *Steph.*; Laniarius albicollis *Vieill.*; Motacilla dubia *Shaw*, Nat. Misc. pl. 949., Gould's Syn. of Austr. Birds, pl., B. of Austr. pl.
2. P. *rufiventris* (Lath.) Lamb. Icon. ined. ii. t. 55. — Turdus prasinus *Lath.* Lamb. Icon. ined. ii. t. 34.; Turdus pectoralis *Lewin*, B. of N. Holl. pl. 8.; Pachycephala pectoralis *Vigors & Horsf.*, Gould's Syn. of Austr. Birds, pl., and B. of Austr. pl., Icones, pl.; Pachyc. striata *Vigors & Horsf.*; Lanius macularius *Quoy & Gaim.* Voy. de l'Astrol. t. 13. f. 1.; Laniarius rubrigaster *Vieill.*
3. P. *fusca* Vigors & Horsf. Linn. Trans. xv. 240., Gould's Syn. of Austr. Birds, pl. f. 1. — Pachycephala fuliginosa *Vigors & Horsf.*
4. P. *olivacea* Vigors & Horsf. Linn. Trans. xv. 241., Gould's Syn. of Austr. Birds, pl. f. 4.
5. P. *xanthoprocta* Gould, Proc. Z. S. 1837. p. 149., Syn. of Austr. Birds, pl. f. 2.
6. P. *longirostris* Gould, Proc. Z. S. 1837. p. 149., Syn. of Austr. Birds, pl. f. 3.
7. P. *lanioïdes* Gould, Proc. Z. S. 1839. 142.
8. P. *rufogularis* Gould, Proc. Z. S. 1840. 164.
9. P. *inornata* Gould, Proc. Z. S. 1840. 164.
10. P. *falcata* Gould, Proc. Z. S. 1842. 134.
11. P. *melanura* Gould, Proc. Z. S. 1842. 134.
12. P. *simplex* Gould, Proc. Z. S. 1842. 135.
13. P. ——— (Homb. & Jacq.) Voy. au Pole Sud, &c. Ois. t. 5. f. 1.
14. P. ——— (Homb. & Jacq.) Voy. au Pole Sud, &c. Ois. t. 5. f. 2.
15. P. ——— (Homb. & Jacq.) Voy. au Pole Sud, &c. Ois. t. 5. f. 3.
16. P. ——— (Homb. & Jacq.) Voy. au Pole Sud, &c. Ois. t. 6. f. 1.
17. P. ——— (Homb. & Jacq.) Voy. au Pole Sud, &c. Ois. t. 6. f. 2.
18. P. ——— (Homb. & Jacq.) Voy. au Pole Sud, &c. Ois. t. 6. f. 3.
19. P. *Gilbertii* Gould, Proc. Z. S. 1844. 107.
20. P. *glaucura* Gould, B. of Austr. pl.

* Established by Mr. Swainson (*Faun. Bor. Amer.* p. 491.) in 1831.
† Established by Messrs. Vigors and Horsfield, from Mr. Swainson's MSS. (*Linn. Trans.* xv. 238.), in 1826.

Eöpsaltria *Swains.**

Bill moderate, with the culmen slightly depressed and straight, but curved at the tip, which is emarginated; the sides compressed; the gonys lengthened and slightly ascending; the nostrils basal, lateral, membranous, with the opening rounded; and the gape furnished with long slender bristles. *Wings* moderate and rounded; with the fourth and fifth quills longest. *Tail* moderate, and even at the end. *Tarsi* rather longer than the middle toe, slender, and covered with broad scales. *Toes* moderate, slender, with the outer longer than the inner, and united at its base to the middle one; the hind toe long, and nearly the length of the middle one; the claws moderate and much curved.

This division is peculiar to Australia, where they are seen flitting in pairs from tree to tree, perched on an eminence, or examining the ground for their food, which consists of insects, &c. Their nest, according to Mr. Gould, is composed of strips of bark, and wiry fibrous roots, held together exteriorly with cobwebs, and ornamented with a few pieces of lichen; the interior is usually lined with leaves, and sometimes with broad blades of grasses. It is usually placed in a fork of some low tree, or in any exposed part of a bush. The eggs are commonly two in number.

1. E. *australis* (Lath.) White's Voy. pl. p. 239. — Muscicapa flavigastra *Lath.* Lamb. Icon. ined. ii. t. 56.; Todus flavigaster *Lath.*; Eöpsaltria flavicollis *Swains.*; Eöps. flavigastra *G. R. Gray*, Lewin's B. of N. Holl. pl. 23., Gould's B. of Austr. pl.; E. parvula *Gould*, Proc. Z. S. 1837. 144.
2. E. *griseo-gularis* Gould, Proc. Z. S. 1837. 144., B. of Austr. pl.

Ptilochloris *Swains.*†

Bill moderate, broad at the base, and with the sides gradually compressed; the culmen slightly depressed and straight, but bent near the tip, which is emarginated; the gonys long and curved upwards; the lateral margins inflected and straight; the nostrils basal, lateral, membranous, and rounded. *Wings* moderate, with the first three quills graduated, and the third quill the longest. *Tail* moderate, and nearly even at the end. *Tarsi* short, but longer than the middle toe, and covered in front with obsolete scales. *Toes* moderate, with the lateral ones unequal, and the outer longest and united beyond the first joint of the middle toe; the hind toe nearly as long as the middle one; the claws moderate, curved, and acute.

The species recorded as belonging to this genus are peculiar to the warmer parts of South America; but their habits and manners have not been noticed by naturalists.

1. Pt. *arcuata* (Cuv.) Lafr. Mag. de Zool. 1833. Ois. t. 12.; Ptilochloris lunatus *Swains.*; Muscicapa squamata *Pr. Wied.*
2. Pt. *remigialis* Lafr. Rev. Zool. 1838. 237.
3. Pt. *rufo-olivacea* Lafr. Rev. Zool. 1838. 238.
4. Pt. *virescens* Lafr. Rev. Zool. 1838. 238.

* Established by Mr. Swainson (*Faun. Bor. Amer.* p. 492.) in 1831.

† Established by Mr. Swainson, in 1831 (*Faun. Bor. Amer.* p. 492.), under the name of *Laniisoma*, which he changed to the above in 1837. *Collurampelis* of M. Lesson (1839) is coequal.

Hullmandel & Walton Lithographers.

PIPRA
1. chrysoptera. Linn. 2. striolata. Pr. Bonap.

Hullmandel & Walton Lithographers

1. CALYPTOMENA viridis. 2. PIPRA erythrocephala. 3. RUPICOLA peruviana. 4. PHŒNICERCUS carnifex.

The second Subfamily,

PIPRINÆ, or MANAKINS,

have the Bill moderate or short, and rather depressed, with the base very broad, the culmen curved, and the sides compressed to the tip, which is emarginated; the nostrils lateral, and more or less hidden by the projecting plumes; the Wings moderate and pointed; the Tail very short and even; the Tarsi more or less long and rather slender; the Toes long and rather slender, with the outer toe united to beyond the second joint of the middle toe, and the inner slightly united.

PHŒNICIRCUS *Swains.**

Bill broad at the base and rather depressed, with the culmen arched, and the sides compressed to the tip, which is slightly emarginated; the gonys short and advancing upwards; the nostrils basal. *Wings* short and convex, with the first three quills equal, and the fourth much shorter, emarginated and narrowed for some length. *Tail* broad and nearly even. *Tarsi* short, equal in length with the middle toe, covered in front with transverse scales, and feathered on the inner side. *Toes* long, the lateral toes unequal, and the outer more united at the base than the inner toe; the claws large and curved.

The species of this genus are found in the warmer parts of South America.

1. P. *carnifex* (Linn.) Swains. Pl. enl. 378., Levaill. Ois. d'Amer. t. 37, 38., Edwards' Birds, pl. 39.

2. P. *nigricollis* Swains. Faun. Bor. Amer. p. 491. — Ampelis carnifex *Spix*, Av. Bras. t. 5.; Ampelis Merremii *Less.*; Phœnicircus atrococcineus *Lafr.*

PIPRA *Linn.*†

Bill short, rather depressed and the base broad, with the culmen curved and the sides compressed to the tip, which is emarginated; the gonys short and ascending; the nostrils lateral, with the opening partly closed by a membrane, and concealed by the projecting plumes. *Wings* short, with the quills narrowed and the two first quills shorter than the third and fourth, which are the longest. *Tail* more or less short and even, sometimes with the middle feathers prolonged. *Tarsi* moderate, longer than

* Mr. Swainson established this genus in 1831 (*Fauna Boreali Americana*, p. 491.). *Carnifex* of Chev. Sundeval (1836) is coequal with the name employed.

† Established by Linnæus in 1766 (*Systema Naturæ*). *Manacus* of Brisson (1760) is synonymous.

the middle toe. *Toes* rather short, the lateral toes unequal, the outer the longest and united to beyond the second joint, the third long and strong; the claws rather short, compressed, curved and acute.

The numerous species of this genus are found in the tropical portions of America. They inhabit the hot humid woods, on the skirts of which they live in small flocks, searching for insects and small fruits. They are very lively and restless in their habits, and are frequently seen on the ground, or now and then on low branches of trees, and sometimes even perched for a long period together near the top of some high tree. The note of one of the species has been compared to the sound produced in cracking a nut.

1. P. *caudata* Shaw, Nat. Misc. pl. 153. — Pipra longicauda *Vieill.* Swains. B. of Br. pl. 45., Spix, Av. Bras. t. 6. f. 1, 2., Thunb. Mem. Acad. Petersb. 1822. t. 7. f. 1.

2. P. *militaris* Shaw, Nat. Misc. pl. 849. — Pipra rubrifrons *Vieill.*

3. P. *melanocephala* Vieill. N. Dict. d'Hist. Nat. xix. p. 163. — Pipra lanceolata, *Wagl.*

4. P. *linearis* Pr. Bonap. Proc. Z. S. 1837. p. 113., Voy. Sulphur, Birds, pl. 20. — Pipra fastuosa *Less.*

5. P. *filicauda* Spix, Av. Bras. t. 8. f. 1. — Pipra filifera *Less.*

6. P. *pareola* Linn. Pl. enl. 687. f. 2. 303, f. 2. — Pipra ægithaloides *Licht.*, Edwards' Birds, pl. 261., Swains. B. of Br. pl. 44., Desm. Tanag. & Manak. t. 50, 51, 52, 53.

7. P. *pareoloides* D'Orb. & Lafr. Rev. Zool. 1838. p. 165.

8. P. *cinerea* Bodd. Pl. enl. 687. f. 1. — Pipra atricapilla *Gmel.* (Tityra ?).

9. P. *pileata* Natt. Pl. col. 172. f. 1.

10. P. *manacus* Linn. Pl. enl. 302. f. 1., Edwards' Birds, pl. 260. f. 1., Pl. enl. 303, f. 1. — Pipra gutturosa *Desm. Tanag. & Manak.* t. 59., Swains. B. of Br. pl. 26.

11. P. *candei* Parz. Rev. Zool. 1841. p. 416., Mag. de Zool. 1843. t. 45.

12. P. *vitellina* Gould, Proc. Z. S. 1843. p. 103., Voy. Sulphur, Birds, pl. 21.

13. P. *serena* Linn. Pl. enl. 324. f. 2., Desm. Tanag. & Manak. t. 63, 64.

14. P. *gutturalis* Linn. Pl. enl. 324. f. 1., Desm. Tanag. & Manak. t. 62. 65.

15. P. *erythrocephala* Linn. Pl. enl. 34. f. 1., Edwards' Birds, pl. 21., Desm. Tanag. & Manak. t. 60, 61. — Pipra aurocapilla, *Licht.*

16. P. *rubrocapilla* Briss. Pl. col. 54. f. 3. — Pipra erythrocephala var. *Lath.*

17. P. *erythrolophos* Vieill. Ency. Meth. i. p. 390.

18. P. *cornuta* Spix, Av. Bras. t. 7. f. 1.

19. P. *chloromeros* Tschudi, Faun. Per. p. 11.

20. P. *aureola* Linn. Pl. enl. 34. f. 3., Edwards' Birds, pl. 261. f. 2., Desm. Tanag. & Manak. t. 54, 55, 56, 57., Pl. enl. 302. f. 2., Edwards' Birds, pl. 83. f. 2., Shaw, Nat. Misc. pl. 249.

21. P. *fasciata* D'Orb. & Lafr. Syn. Av. p. 38.

22. P. *leucocilla* Linn. Pl. enl. 34. f. 2., Edwards' Birds, pl. 26., Desm. Tanag. & Manak. t. 50. —Pipra leucocephala *Linn.*

23. P. *cyanocapilla* Wagl. Isis, 1830. p. 934. — Pipra coronata *Spix*, Av. Bras. t. 67. f. 1.

24. P. *cæruleocapilla* Tschudi, Faun. Per. p. 11.

25. P. *chrysoptera* Lafr. Rev. Zool. 1843. p. 97., Mag. de Zool. 1843. Ois. t. 44.

26. P. *chloris* Natt. Pl. col. 172. f. 2.

27. P. *strigalata* Pr. Max. Reise. i. p. 168., Pl. col. 54. f. 1. 2., Swains. B. of Br. pl. 25. — Pipra lineata *Thunb.* Mem. Acad. Petersb. 1822. p. 284. t. 8. f. 1.

28. P. *striolata* Pr. Bonap. Proc. Z. S 1837. p. 122.

29. P. *galeata* Licht. Cat. Dupl. Berl. Mus., Swains. B. of Br. pl. 23. — Pipra Wiedii, *Less.*; Type of Metopia, *Swains.* (1831.)

30. P. *torquata* Gmel. Seba, 1. t. 57. f. 3.

31. P. *cristata* Gmel. Seba, 1. t. 59. f. 4.

32. P. *rubetra* Gmel. Seba, 1. t. 102. f. 4.

33. P. *grisea* Gmel. Seba, 1. t. 70. f. 7.

34. ? P *cinerea* Gmel.

35. ? P. *plumbea* Vieill. Ency. Meth. 388., Azara, No. iii.

36. ? P. *nigricollis* Gmel.

37. ? P. *hæmorrhoa* Gmel.

38. ? P. *pectoralis* Lath.

39. ? P. *picicitli* Lath.

40. ? P. *miacatototl* Lath.

Rupicola *Briss.**

Bill moderate, robust, and broad at the base, with the culmen curved, and the sides compressed to the tip, which is emarginated; the gonys straight and slightly ascending; the nostrils lateral and large, with the opening ovoid, partly closed by a membrane, and entirely hidden by the plumes that hang over the bill. *Wings* moderate, the first quill of the male emarginated, and narrowed for some length from the

* Brisson established this genus in 1760 (*Ornithologie*). *Orinus* of Nitzsch (1840) is synonymous.

tip, while in the female it is simply acute, the fourth and fifth of both sexes equal and longest. *Tail* short and even. *Tarsi* as long as the middle toe, robust and partly covered by the plumes. *Toes* long and strong, the outer toe longer than the inner, and united beyond the second joint, and the inner at the base, the hind toe long and strong, the claws long, curved and acute.

These beautiful birds are found in the warmer parts of South America. They dwell in the extensive woods or in the precipitous places that have been formed by the large torrents, where the sexes are met with in separate bands of few individuals. They are more usually seen on the low branches or on the fallen trees that have been rooted up by hurricanes. Their flight is low, and they seem restless, and are frequently observed making quick and fluttering motions while on the branches, but sometimes remain stationary in one place for a long time. Their food consists of the fruits of a species of laurel or of a psychotria, of the small berries of an anonacea, and of the berry-shaped capsules of a rhinanthea. The note of these birds is a hoarse repetition of the syllable ket-ket-ket forcibly repeated in a very sharp tone. The females build their nest in a sinuosity of the rocks, sheltering it under a projecting point. It is properly of a circular form, but occasionally varied by the bendings of the rocks, and is composed of a tissue of fibres of roots, plastered externally with moistened earth, and lined internally with finer vegetable fibres and hair. The young do not quit the nest until they are nearly full grown.

1. R. *crocea* Bonn. Pl. enl. 39. 747. — Pipra rupicola *Linn.*; Rupicola aurantia *Vieill.*; R. cayana *Swains.*; R. elegans *Steph.*, Levaill. Hist. Nat. Roll. t. 51, 52, 53.

2. R. *peruviana* (Lath.) Pl. enl. 745., Levaill. Hist. Nat. Roll. t. 54.

Calyptomena *Raffl.**

Bill short, rather depressed, and very broad at the base, with the culmen and lateral margins curved and the sides compressed to the tip, which is emarginated; the gonys short and ascending; the nostrils lateral, with the opening rounded and concealed by the projecting plumes of the crest. *Wings* long, with the third and fifth quills equal and rather shorter than the fourth, which is the longest. *Tail* very short and slightly rounded. *Tarsi* as long as the hind toe, strong and covered in front with broad scales. *Toes* long, with the outer toe longer than the inner, and united beyond the second joint, the hind toe long and strong, the claws moderate, curved and acute.

This bird is found in the retired parts of the forests of Sumatra and Singapore. It is usually observed perched on the highest branches of the trees, and its food is considered to consist entirely of vegetable substances.

C. *viridis* Raffl. Linn. Trans. xiii. p. 295.; Horsf. Zool. Res. t. .; Rupicola viridis *Temm.* Pl. col. 216. — Calyptomena Rafflesii, et C. caudacuta, *Swains.*

* Established by Raffles in 1821 (*Linn. Trans.* xiii. p. 296.).

November, 1846.

MUSEUM TRING

Ballmandel & Walton Lithographers.

COCHOA
viridis Hodg.

1 AMPELIS garrulus. 2. TERSA venusta. 3. PHIBALURA flavirostris. 4. COTINGA cærulea.
5. CARPORNIS melanocephala. 6 COCHOA purpurea. 7. PROCNIAS alba.

The third Subfamily,

AMPELINÆ, or CHATTERERS,

have the Bill more or less long, with the gape very wide, the culmen rather depressed and curved to the tip, which is emarginated; the sides compressed towards the apex, the gonys long and ascending; the Nostrils lateral, mostly exposed, and somewhat oval; the Wings moderate, with the second to the fourth quills generally the longest; the Tail generally short and even; the Tarsi mostly short, and the Toes long, the outer toe slightly united at the base.

PHIBALURA *Vieill.**

Bill rather short, and the base very broad, with the culmen gradually curved, and the sides compressed to the tip, which is emarginated; the gonys short and ascending; the nostrils lateral and placed in a broad groove, with the opening rounded, and partly concealed by the frontal plumes. *Wings* long, with the first quill nearly as long as the second and third, which are equal and longest. *Tail* lengthened and much forked. *Tarsi* shorter than the middle toe, strong and broadly scutellated. *Toes* long and strong, with the outer toe longer than the inner, and united at its base, the hind toe strong and long; the claws strong, compressed, and curved.

The type of this genus is found in the tropical portions of America.

P. *flavirostris* Vieill. Gal. des Ois. t. 74. — Phibalura cristata *Swains.* Zool. Illustr. pl. 31., Temm. Pl. col. 118.; Pipra chrysopogon *Wagl.*; Pipra forficata *Thunb.*

TERSA *Vieill.*†

Bill moderate, rather depressed, and the base extremely broad, with the culmen gradually curved, and the sides suddenly compressed for two-thirds of their length to the tip, which is emarginated; the gonys moderate, and ascending; the nostrils lateral, with the opening rounded and partly concealed. *Wings* moderate, with the first quill nearly as long as the second, which is rather longer than the third. *Tail*

* Established by Vieillot in 1816 (*Analyse, &c.* p. 31.). M. Gloger changed the name to *Chelidis* in 1827.
† Vieillot established this genus in 1816 (*Analyse, &c.* p. 38.): in 1825 the same author changed the name to *Tersina.*

moderate, and rather emarginated in the middle. *Tarsi* as long as the middle toe, and covered in front with broad scales. *Toes* long, with the lateral toes nearly equal; the claws long, curved, and acute.

It is in the tropical portions of America that the typical species of this genus is found.

T. *ventralis* (Ill.) — Ampelis tersa *Linn.*; Tersina cœrulea *Vieill.*; Procnias cyanoptera *Pr. Max.*; P. hirundinacea *Swains.*, Zool. Ill. pl. 28.; Tersa cayana *Steph.*, Lath. Hist. of B. pl. 85*., Pl. col. 5.

Ampelis *Linn.**

Bill short, slightly depressed, and the base broad, with the culmen gradually curved, and the sides compressed to the tip, which is emarginated; the gonys short, and curved upwards; the nostrils lateral, with the opening rounded, and concealed by the frontal plumes. *Wings* long, with the second quill the longest, the first longer than the third. *Tail* moderate and nearly even. *Tarsi* shorter than the middle toe, and covered in front with broad scales. *Toes* moderate, with the lateral toes nearly even, and the outer one slightly united at the base, the hind toe moderate and strong; the claws rather short, compressed, much curved, and acute.

They inhabit the northern parts of Europe, Asia, and North America, and are migratory according to the seasons, appearing in the more temperate parts of Europe and America on the approach of winter, and returning to their old haunts on the appearance of summer. They are usually observed in small parties, but sometimes they assemble in large flocks of many hundred individuals, especially if on their migrations. Their food consists of various kinds of fruits, and as the fruits become scarce they feed on insects; these they take by flying after them until their prey is secured, when they return again to the same perch, for the purpose of watching the approach of another insect. The nest is placed in the fork of a tree, at a distance of a few feet from the ground: it is composed of coarse grass, and lined interiorly with very fine grass, on which are deposited three or four eggs.

1. A. *garrulus* Linn. Pl. enl. 261., Gould, B. of Eur. pl. 160., Le Vaill. Ois. de Parad. t. 49.—Bombycilla bohemica *Briss.*; Bombyciphora poliocephala *Meyer*, Pr. Bonap. Amer. Orn. pl. 16. f. 2.? Audub. B. of Amer. pl. 363.?

2. A. *japonica* (Siebold) Bull. de Sci. Nat. 1825. p. 87.—Bombycilla phœnicoptera *Temm.*, Pl. col. 450.

3. A. *cedrorum* (Vieill.) Ois. d'Am. Sept. t. 57., Gal. des Ois. t. 118., Edwards's Birds, pl. 242., Wils. Am. Orn. pl. 7. f. 1., Audub. B. of Amer. pl. 43., Le Vaill. Ois. de Parad. t. 50.

Cotinga.†

Bill moderate, depressed, and the base broad, with the culmen gradually curved, and the sides compressed to the tip, which is emarginated; the gonys long, and slightly ascending; the nostrils lateral, and placed in a membranous groove, with the frontal feathers projecting to the opening, which is large and oval. *Wings* rather long, with the first four quills narrowed, especially the two first, the second and third equal and longest, the first and fourth equal, and rather shorter than the two last mentioned. *Tail*

* Linnæus established this genus in 1735. *Bombycilla* of Vieillot (1807), *Bombyciphora* of Meyer (1810), and *Bombycivora* of M. Temminck (1815), are synonymous with the name employed.

† Brisson established this genus in 1760 (*Ornithologie*, ii. p. 339.).

moderate, and nearly even. *Tarsi* rather shorter than the middle toe, strong, and covered in front with broad scales. *Toes* long, with the outer longer than the inner, and slightly united at the base, the hind toe long and strong; the claws rather long, compressed, curved, and acute.

The showy birds of this genus reside in the tropical portions of America, especially on the trees that grow by the sides of the rivers. They feed on fruits and insects, and are thus compelled to migrate from place to place in search of their food. The females deposit four eggs, and the nest is formed in the highest branches of trees.

1. C. *cærulea* (Vieill.) Pl. enl. 186. — Ampelis cotinga *Linn.*, Le Vaill. Ois. d'Am. et Ind. t. 34, 35, 36., Edwards's Birds, pl. 241.

2. C. *cincta* (Bodd.) Pl. enl. 188.?—Ampelis cotinga *Linn.* (pt.); A. cærulea *Vieill.*, Le Vaill. Ois. d'Amer. et Ind. t. 41., Shaw, Nat. Misc. pl. 817.; A. superba *Shaw*, Nat. Misc. pl. 821., Le Vaill. Ois. d'Amer. et Ind. t. 42., Edwards's Birds, pl. 340.

3. C. *Nattereriі* (Boiss.) Rev. Zool. 1840. p. 2.

4. C. *pompadora* (Linn.) Pl. enl. 279., Edwards's Birds, pl. 341., Le Vaill. Ois. d'Amér. et Ind. t. 31, 32, 33.—Ampelis grisea *Bodd.* Pl. enl. 699., Lanius nengeta *Gmel* ; A. cinerea *Lath.* ; A. macroura *Temm.*

5. C. *purpurea* (Licht.) Cat. Dupl. Berl. Mus. p. 57.— Ampelis atropurpurea *Pr. Max.?*

6. C. *lamellipennis* (Lafr.) Rev. Zool. 1839. p. 292., Mag. de Zool. 1839. Ois. t. 9. — Ampelis leucura *Temm.*

7. C. *cayana* (Linn.) Pl. enl. 624., Le Vaill. Ois. d'Amer. et Ind. t. 27, 28, 29, 30.

8. C. *mayana* (Linn.) Pl. enl. 229., Le Vaill. Ois. d'Amer. et Ind. t. 43.

9. C. *viridis* (D'Orb. & Lafr.) Syn. Av. p. 40., Voy. dans l'Amer. Merid. t. 30. f. 2. — Ampelis Riefferii *Boiss.*, Rev. Zool. 1840. p. 3.

10. C. *elegans* (Tschudi), Wiegm. Archiv. 1843. p. 385.—Ampelis aureopectus *Lafr.* Rev. Zool. 1843. p. 68., Mag. de Zool. 1843. Ois. t. 39.

11. C. *Tschudii.* — Ampelis cincta *Tschudi*, Wiegm. Archiv. 1843. p. 385.

12. C. *rufaxilla* (Tschudi), Fauna Peruana, p. 10.

13. C. ——— Pl. enl. 515. — Turdus cayanensis *Gmel.*

14. C. *cristata* (Gmel.) Miller, Ill. pl. 15. G.

15. C. *fusca* (Vieill.) N. Dict. d'Hist. Nat. viii. p. 162.

16. C. *hypopyrrha* (Vieill.) N. Dict. d'Hist. Nat. viii. p. 164.

17. C. *aureola* (Vieill.) N. Dict. d'Hist. Nat. viii. p. 164.

CARPORNIS.

Bill moderate, slightly depressed, and the base very broad, with the culmen much curved near and the sides compressed to the tip, which is emarginated; the gonys short and ascending; the nostrils lateral, and placed in a membranous groove, with the frontal plumes projecting to the opening, which is large and oval. *Wings* moderate, with the first quill much shorter than the second, which is shorter than the third and fourth; these are equal and longest. *Tail* long, broad, and slightly emarginated. *Tarsi* shorter than the middle toe, and covered in front with broad scales. *Toes* moderate, with the lateral toes nearly equal, the outer one united at its base; the claws rather long, compressed, curved, and acute.

These birds are found in the tropical forests of America, and their habits and manners are similar to those of the last genus.

1. C. *melanocephala* (Pr. Max.) Beitr. i. 143., Swains. Zool. Illustr. pl. 25. — Cotinga speciosa *Thunb.*, Griff. An. Kingd. 1. pl. p. 507.

2. C. *cucullata* (Swains.) Zool. Illust. pl. 37., Pl. col. 363.

3. C. *arcuata* (Cuv.) Rev. Zool. 1843. p. 98., Mag. de Zool. 1843. Ois. t. 40.

4. C. *rubrocristata* (D'Orb. & Lafr.) Syn. Avium, p. 39., Voy. dans l'Amer. Mer. Ois. t. 31. f. 1. — Ampelis rufocristata *Boiss.*

5. C. ? *nigra* (Less.) Cent. Zool. t. 6. — Chrysopteryx erythrorhynchus *Swains.*; Ampelis chrysoptera *Nordm.*, Ermann, Reise, Zool. Atlas, t. 10. f. 1.

Cochoa *Hodgs.**

Bill rather long, rather depressed, and broad at the base, with the culmen gradually curved, and the sides compressed to the tip, which is emarginated and slightly hooked; the gonys very short and ascending; the nostrils lateral, and placed in a membranous groove, with the frontal feathers projecting to the opening, which is large and oval. *Wings* long, with the first quill shorter than the second, third, and fourth, which are equal and longest. *Tail* long, broad, and rounded. *Tarsi* rather shorter than the middle toe, and covered by broad scales in front. *Toes* long and slender, with the outer toe rather longer than the inner, and slightly united at the base, the hind toe very long; the claws moderate, compressed, curved, and acute.

The species are found in Nepal, and the Indian Archipelago. Mr. Hodgson says of the Nepalese birds that "they are shy in their manners, adhere exclusively to the woods, live solitary or in pairs, and feed almost equally on the ground and on trees. The food consists of stony berries, small univalve mollusca, and sundry kinds of aquatic insects."

1. C. *viridis* Hodgs. Journ. A. S. B. 1836. p. 359.
2. C. *purpurea* Hodgs. Journ. A. S. B. 1836. p. 359.—C. Hodgsoni *Blyth.*
3. C. *azurea* (Temm.) Pl. col. 274. — Type of Oreas *Temm.* (1840).

Procnias *Hoffm.*†

Bill moderate, much depressed, and very broad at the base, with the culmen slightly curved, and the sides compressed to the tip, which is emarginated; the gonys very short, and ascending; the nostrils lateral, and placed in a membranous groove, with the frontal plumes projecting to the opening, which is large and oval. *Wings* rather long, with the third and fourth quills equal and longest. *Tail* moderate, and slightly emarginated. *Tarsi* shorter than the middle toe, and covered in front with transverse scales. *Toes* long, with the outer toe rather longer than the inner, and united at the base, the hind toe long and strong.

The species of this genus reside in the forests of the tropical parts of America. Their habits and manners are like those of the *Cotingæ*, but some species possess a very loud and powerful voice, which may be heard a great distance, and is said to vary according to the season. It is stated that the noise uttered by one of these birds is like the tolling of a distant church bell, which is more distinctly heard during the heat of the day, when every other bird has ceased to sing: this bird utters a toll, and a minute pause ensues, then another toll with a repetition of the pause, and then again a toll, and so on; while the note of another species has been compared to the noise produced by a hammer striking on an anvil.

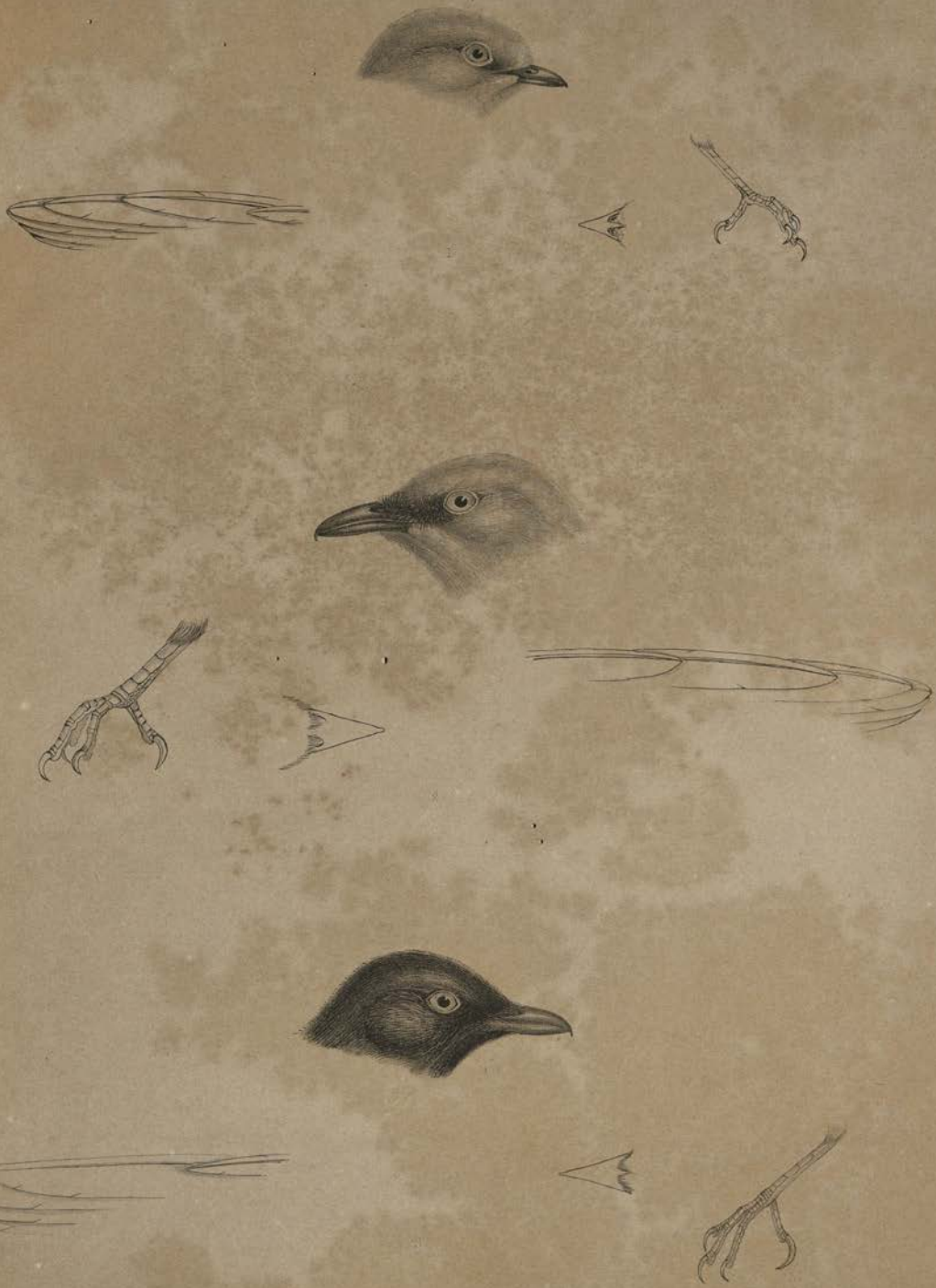
1. P. *variegata* (Linn.) Pl. col. 51., Cuv. Règne Anim. t. 4, f. 4.
2. P. *alba* (Thunb.) Mem. de la Soc. de Mosc. 1823. p. 177. — Procnias nudicollis *Pr. Max.*, Pl. col. 368. 383.; Casmarhynchus ecaruculatus *Spix*, Av. Bras. t. 4.
3. P. *nivea* (Bodd.) Pl. enl. 793. — Ampelis carunculata *Gmel.*, Le Vaill. Ois. d'Amér. et Ind. t. 39, 40.

* Mr. Hodgson established this genus in 1836 (*Journ. As. Soc. Beng.* 1836. p. 360). He changed the name to *Prosorinia* in 1841: *Oreas* of M. Temminck (1840) is synonymous.

† Hoffmansegg established this genus, which was adopted by Illiger in 1811. (*Prod. Syst. Mam. et Av.*). *Casmarhynchus* of M. Temminck (1820), and *Arapunga* and *Averano* of M. Lesson (1831) are synonymous.

C. Hullmandel's Patent Lithotint.

PTILIOGONYS
armillatus (Vieill.)



1 PTYLOGONYS cinereus. 2 CAMPEPHAGA cana. 3 PERICROCOTUS speciosus.

The fourth Subfamily,

CAMPEPHAGINÆ, or CATERPILLAR-CATCHERS,

have the Bill short, and rather depressed, with the culmen slightly curved, and the sides compressed to the tip, which is emarginated and sometimes hooked; the gape furnished with a few short bristles; the nostrils basal, rounded, and more or less exposed; the Wings moderate, with the third, fourth, and fifth quills the longest; the Tail long and rounded on the sides; the Tarsi short, and covered with transverse scales; the Toes generally short, and the lateral ones unequal; the claws moderate, compressed, and much curved.

PTILOGONYS *Swains.**

Bill short, and rather depressed, with the culmen gently curved, and the sides compressed to the tip, which is hooked and emarginated; the gonys moderate and ascending; the nostrils placed in a broad short membranous groove, large, rather rounded, and slightly covered with short bristles. *Wings* moderate, with the first three quills graduated, and the fourth and fifth nearly equal and longest. *Tail* lengthened, broad, and slightly forked. *Tarsi* the length of the middle toe, feathered below the knee and broadly scaled in front. *Toes* moderate, rather slender, the inner one shorter than the outer, which is united at its base; the hind toe short, strong; the claws moderate, compressed, and much curved.

The birds inhabit the warmer parts of South America; and their habits and manners are unknown.

1. P. *cinereus* Swains. Zool. Illustr. n. s. pl. 62. 120. — Hypothymis chrysorrhœa *Licht.*
2. P. *nitens* Swains. Two Cent. and a Quart. p. 285.
3. P. *leucotis* Tschudi, Fauna Peruana, p. 10.
4. P. *griseiventer* Tschudi, Fauna Peruana, p. 10.
5. P. *armillatus* (Vieill.) Ois. d'Amér. Septr. pl. 42. — Myiadestes genibarbis *Swains.* Nat. Libr. x. Flyc. pl. 13.; Type of Myiadestes *Swains.* (1838).
6. P. *obscurus* (Lafr.) Rev. Zool. 1839. p. 98.

PERICROCOTUS *Boie.*†

Bill moderate, broad at the base, with the culmen slightly curved, and the sides much compressed to the tip, which is emarginated and hooked; the gonys long and slightly ascending; the nostrils basal,

* Established by Mr. Swainson in 1824. It is synonymous with *Hypothymis* of M. Lichtenstein (1831 ?), and it embraces *Myiadestes* of Mr. Swainson (1838).

† Established by M. Boie in 1826 (*Isis*, 1826, p. 972.) *Phœnicornis* of M. Boie (1827), and *Acis* of M. Lesson (1831) are coequal.

placed in a sunken groove, rounded, and concealed by the frontal plumes. *Wings* moderate, and with the third, fourth, and fifth quills nearly equal and longest. *Tail* lengthened, and much graduated on the sides. *Tarsi* shorter than the middle toe, slender, and covered in front with narrow scales. *Toes* moderate, with the lateral ones nearly equal; the hind toe moderate; the claws moderate, much curved and acute.

These showy birds are found in various parts of India and its archipelago. They inhabit in pairs the woody districts, either in the jungle, or the hedges and avenues near houses. When first discovered, they usually hide themselves among the foliage as quickly as possible. They are restless birds, flying from tree to tree within a certain space, examining the foliage of the high branches of the lofty trees for various insects and their larvæ, and may occasionally be seen hanging from the slender twigs like a titmouse, while examining the branches.

1. P. *miniatus* (Temm.) Boie, Pl. col. 156.
2. P. *flammeus* (Forst.) Zool. Ind. p. 25. pl. 15., Temm. Pl. col. 263., Swains. Zool. Ill. n. s. pl. 52., Jerd. Ill. Ind. Ornith. pl. 11.
3. P. *speciosus* (Lath.) Strickl. — Muscicapa princeps *Vigors*, Proc. Z. S. 1830. p. 22., Gould, Cent. of Birds, pl. 7.
4. P. *brevirostris* (Vigors), Proc. Z. S. 1831. p. 43., Gould, Cent. of Birds, pl. 8.
5. P. *elegans* M'Clell. Proc. Z. S. 1839. p. 156.
6. P. *affinis* M'Clell. Proc. Z. S. 1839. p. 157.
7. P. *peregrinus* (Linn.) Mus. Carls. t. 48. — Parus coccineus *Gmel.*; P. indicus *Sparrm.* Mus. Carls. t. 50.; Motacilla cinnamomea *Linn.* Gould, Cent. of B. pl. 9.
8. ? P. *subflavus* (Vieill.) Ency. Meth. p. 817., Le Vaill. Ois. d'Afr. t. 155. f. 2.
9. P. *roseus* (Vieill.) N. Dict. d'Hist. Nat. xxi. p. 486.
10. P. *erythropygius* (Jerd.) Bl.

CAMPEPHAGA *Vieill.**

Bill short, and broad at the base, with the culmen rather depressed, slightly curved, and the sides gradually compressed to the tip, which is emarginated; the gonys long, and slightly ascending; the gape furnished with a few short bristles; the nostrils basal, lateral, rounded, and concealed by the frontal plumes. *Wings* moderate, with the first quill short, the second shorter than the third, and the third more or less shorter than the fourth, which is the longest. *Tail* long, broad, and rounded on the sides. *Tarsi* short, the length of the middle toe, and covered in front with broad scales. *Toes* moderate, the inner toe shorter than the outer, which is united at its base; the hind toe moderate and broad, padded beneath; the claws moderate, compressed, and curved.

These birds are found in Africa, India, its archipelago, and Australia. They are shy and wary, and are usually seen flying from tree to tree, slowly and carefully searching among the foliage of the lofty trees, examining the leaves separately for all kinds of soft insects, such as caterpillars, mantides, and grasshoppers, and they occasionally feed on the fruits of the banyan trees. They continue their search, hopping from branch to branch, till the tree has been entirely inspected, when they fly off together to another tree. Their flight is undulating, powerful, and performed with few vibrations of the wings; they rarely fly except to pass from one portion of the forest to another, or occasionally to take insects on the wing, as they pass within a certain distance of them while perched on a branch. The eggs are usually two in number, and are deposited in a nest placed in the fork of a branch; it is entirely composed of small dead twigs, firmly matted together with a very fine white downy substance like a cobweb, and a species of lichen, and is extremely shallow.

* Established by Vieillot in 1816 (*Analyse, &c.* p. 39.). *Coblephyris* (1817) of Cuvier is synonymous. It embraces *Graucalus* of Cuvier (1817), *Lalage* of M. Boie (1826), with which *Erucivora* of Mr. Swainson (1831) is synonymous, *Volvocivora* of Mr. Hodgson (1837), *Lanicterus* of M. Lesson (1838), and *Symmorphus* of Mr. Gould (1837).

1. C. *nigra* Vieill. Le Vaill. Ois. d'Afr. t. 165. — Ceblephyris ater *Less.*; Campephaga atrata *Swains.*

2. C. *labrosa* (Swains.) Zool. Ill. pl. 179. — Lanicterus Swainsoni *Less.*

3. C. *xanthornoides* (Less.) Ann. des Sci. Nat. 1838. p. 169. — Type of Lanicterus *Less.* (1838).

4. C. *phœnicea* (Lath.) — Tanagra dubia *Shaw*, Nat. Misc. pl. 252.; Ceblephyris melanoxantha *Licht.*; Turdus phœnicopterus *Temm.* Pl. col. 71., Swains. B. of W. Afr. pl. 27, 28.; C. flavus *Temm.* Le Vaill. Ois. d'Afr. t. 164.

5. C. *lobata* (Temm.) Pl. col. 279, 280.

6. C. *papuensis* (Gmel.) Pl. enl. 630. — Graucalus caledonicus *Less.*; G. cæsius *Cuv.*; Type of Graucalus *Cuv.* (1817).

7. C. *Desgrazii* Homb. & Jacq. Voy. au Pole Sud, Ois. t. 7. f. 1.

8. C. *Macei* (Less.) Tr. d'Orn. p. 349. — Graucalus nipalensis *Hodgs.*

9. C. *melanotis* (Gould), Proc. Z. S. 1837. p. 143., Gould, Syn. Austr. B. pl. f. 2. (head).

10. C. *striata* (Bodd.) Pl. enl. 629. — Corvus novæ guineæ *Gmel.*; Coracina fasciata *Vieill.*; Graucalus lineatus *Less.*; C. Dussumieri *Less.* Tr. d'Orn. p. 349., Voy. au Pole Sud. Ois. t. 8. f. 1.

11. C. *melanops* (Lath.) Ellis's Icon. ined. 78., Le Vaill. Ois. de Par. t. 30., Gould, Syn. Austr. B. pl. f. 3., B. of Austr. pl.

12. C. *parvirostris* Gould, Proc. Z. S. 1837. p. 143., Syn. Austr. B. pl. f. 1.

13. C. *mentalis* (Vig. & Horsf.) Linn. Trans. xv. p. 217., Gould, Syn. Austr. B. pl. f. 3.

14. C. *lineata* (Swains.) Zool. Journ. i. p. 466. — Graucalus Swainsoni *Gould*, Syn. Austr. B. pl. f. 2.

15. C. *tenuirostris* (Jard. & Selby), Ill. Ornith. pl. 114. — Ceblephyris Jardinii *Rüpp.* Gould, Syn. Austr. B. pl. f. 1.

16. C. *pectoralis* (Swains.) B. of W. Afr. i. p. 249., Jard. & Selby, Ill. Orn. pl. 57. — Picnonotus niveoventer *Less.*

17. C. *robusta* (Lath.) Lamb. Icon. ined. i. 52.

18. C. *phasianellus* Gould, Proc. Z. S. 1839. p. 142. — Ceblephyris maxima *Rüpp.* Ornith. Misc. 1839. p. 28. t. 3.

19. C. *affinis* Rüpp. Ornith. Misc. 1839. p. 38.

20. C. *atriceps* (Müll. & Schl.) Verh. Natuurl. Gesch. Nederl. p. 190.

21. C. *personata* (Müll. & Schl.) Verh. Natuurl. Gesch. Nederl. p. 190.

22. C. *larvata* (Müll. & Schl.) Verh. Natuurl. Gesch. Nederl. p. 190.

23. C. *Temminckii* (Müll. & Schl.) Verh. Natuurl. Gesch. Nederl. p. 191.

24. C. (*Boyeri*) (Homb. & Jacq.) Voy. au Pole Sud, Ois. t. 9. f. 3.

25. C. *bicolor* (Müll. & Schl.) Verh. Natuurl. Gesch. Nederl. p. 191.

26. C. ——— (Homb. & Jacq.) Voy. au Pole Sud, Ois. t. 8. f. 2.

27. C. (*schisticeps*) (Homb. & Jacq.) Voy. au Pole Sud, Ois. t. 10. f. 1.

28. C. (*Marescotii*) (Homb. & Jacq.) Voy. au Pole Sud, Ois. t. 10. f. 2.

29. C. *cæsia* (Licht.) Le Vaill. Ois. d'Afr. t. 162, 163. — Ceblephyris cana *Cuv.*; C. Levaillantii *Temm.*

30. C. *grisea* Less. Vieill. Gal. des Ois. t. 130.

31. C. *cana* (Linn.) Licht. Pl. enl. 541.

32. C. *Sykesii* (Strickl.) Ann. Nat. Hist. 1845. p. 36. — Ceblephyris cana *Sykes*; C. fimbriatus *Jerd.*

33. C. *javensis* (Horsf.) Linn. Trans. xiii. p. 145. — Ceblephyris fimbriatus *Temm.* Pl. col. 249, 250.; C. striga *Horsf.*

34. C. *cinerea* (Less.) Voy. aux Ind. Orient. Zool. i. p. 262.

35. C. *lugubris* (Sundev.) — Volvocivora melachistos *Hodgs.*; Graucalus maculosus *M'Clell.*; Picnonotus carbonarius *Less.*

36. C. *tricolor* (Swains.) — Ceblephyris melanoptera *Rüpp.* Ornith. Misc. p. 25. t. 2. f. 1.

37. C. *melas* (Müll. & Schl.) Verh. Natuurl. Gesch. Nederl. p. 189.

38. C. *plumbea* (Müll. & Schl.) Verh. Natuurl. Gesch. Nederl. p. 189.

39. C. *morio* (Müll. & Schl.) Verh. Natuurl. Gesch. Nederl. p. 189.

40. C. *cinnamomea* Müll. & Schl. Verh. Natuurl. Gesch. Nederl. p. 189.

41. C. *leucopygia* (Gould), Proc. Z. S. 1837. p. 145. — Type of Symmorphus *Gould*, (1837).

42. C. *orientalis* (Gmel.) Pl. enl. 273. f. 2. — Sylvia leucophæa *Vieill.*; Type of Lalage *Boie* (1826).

43. ? C. *humeralis* (Gould). Proc. Z. S. 1837. p. 143.

44. C. *leucomela* (Vigors), Linn. Trans. xv. p. 215. — Lanius karu *Less.* Voy. de la Coqu. Ois. t. 12.

45. C. *aurea* (Reinw.) Pl. col. 382. f. 2., Voy. au Pole Sud, Ois. t. 10. f. 3.

46. C. (*rufiventris*) (Homb. & Jacq.) Voy. au Pole Sud, Ois. t. 11. f. 1.

47. C. *timorensis* (Müll. & Schl.) Verh. Natuurl. Gesch. Nederl. p. 190.

48. C. *chalcocephala* (Temm.) Pl. col. 453. f. 1.

49. C. *ardoisiacea* (Less.) Tr. d'Orn. p. 369.

50. C. *cærulescens* (Blyth), Journ. As. Soc. Beng. 1842. p. 463.

C. Hullmandel's Patent Lithotint.

IRENA
cyanogaster Vig

The fifth Subfamily,

DICRURINÆ, or DRONGO SHRIKES,

have the Bill of various lengths, broad at the base, with the culmen more or less keeled, and curved to the tip; the sides compressed; the Nostrils usually concealed by short compact plumes; and the Gape furnished with strong bristles; the Wings long, with the fourth and fifth quills generally the longest; the Tarsi and Toes short, and strongly scutellated.

ARTAMUS *Vieill.**

Bill moderate, strong, with the sides compressed, and the culmen elevated at the base, rounded, and curved from the base to the tip, which is slightly emarginated; the gape scarcely bristled; the nostrils lateral, small, rounded, pierced in the substance of the bill, and the opening partly hidden by the short frontal plumes. *Wings* very long and pointed, with the first quill rudimental, and the second the longest. *Tail* moderate and slightly forked. *Tarsi* short and strong, the length of the middle toe, and covered with transverse scales. *Toes* short, the outer one united at the base to the middle, and the lateral ones equal; the hind toe as long as the middle, strong, and armed with a strong curved claw.

The countries of these birds are, India, its Archipelago, Australia, and Madagascar. "They are generally observed," says Mr. Jerdon, "in the wooded country, seeking their food, which consists of soft-winged insects, in the air. Sometimes they are seen in flocks like swallows, at other times in small groups, one every now and then darting from its perch on the top of a palm tree, and making a short circuit in the air after insects, and then reseating itself, though not generally on the same tree. They at times skim over the surface of the water, and return to rest on a low branch, which overhangs it. Their flight is rapid, elegant, and remarkably like that of the swallow." They appear to migrate in flocks to new localities in search of insects; and seeds also form a portion of their subsistence. It has been remarked of one species, that it has the peculiar habit of suspending itself in perfect clusters like a swarm of bees: a few birds congregate together "on the under side of a dead branch, while others of the flock attach themselves one to the other, in such numbers that they have been observed nearly of the size of a bushel measure." The nest is usually placed in a fork of a tree, or in a hollow caused by the rotten portion of a large branch separating from the trunk. It is composed of twigs, lined with fibrous roots or grass. The eggs are generally three or four in number.

1. A. *leucorhynchus* (Gmel.) Vieill. Pl. enl. 9. f. 1. — Loxia melaleuca *Forst.* Icon. ined. 40.; Lanius dominicanus *Gmel.* Kittl. Kupf. der Vögel. t. 30. f. 1.

2. A. *leucogaster* (Valenc.) Wagl. Ann. du Mus. Hist. Nat. iv. t. 7. f. 2. — Leptopteryx leucorhynchus *Horsf.*

3. A. *fuscus* Vieill. N. Dict. d'Hist. Nat. xvii. p. 297. — Ocypterus rufiventer *Valenc.* Ann. du Mus. iv. t. 7. f. 1.

4. A. *cinereus* Vieill. N. Dict. Hist. Nat. xvii. p. 297., Valenc. Ann. du Mus. t. 9. f. 2., Gould, B. of Austr. pl.

5. A. *sordidus* (Lath.) Lamb. Icon. ined. ii. t. 30. — Turdus tenebrosus *Lath.* Lamb. Icon. ined. ii. t. 38.; Artamus lineatus *Vieill.*; Ocypterus albo-vittatus *Cuv.* Reg. An. t. 8. f. 2., Valenc. Ann. du Mus. t. 8. f. 2., Kittl. Kupf. der Vögel. t. 30. f. 2., Gould, B. of Austr. pl.

6. A. *minor* Vieill. N. Dict. Hist. Nat. xvii. p. 298. — Ocypterus fuscus *Valenc.* Ann. du Mus. iv. t. 9. f. 1., Gould, B. of Austr. pl.

7. A. *leucopygialis* Gould, Proc. Z. S. 1842. p. 17., Gould, B. of Austr. pl.

8. A. *personatus* Gould, Proc. Z. S. 1840. p. 149., Gould, B. of Austr. pl.

9. A. *superciliosus* Gould, Proc. Z. S. 1836. p. 142., Gould, B. of Austr. pl.

10. A. *viridis* (Gmel.) Vieill. Pl. enl. 32. f. 2.

11. A. *leucocephalus* (Gmel.) Pl. enl. 374

* Established by Vieillot (1816) in his *Analyse*, p. 41. *Ocypterus* of Cuvier (1817) and *Leptopteryx* of Dr. Horsfield (1820) are synonymous.

ANAIS *Less.**

Bill short, depressed, broad at the base, the culmen rounded and curved at the tip, which is slightly emarginated; the gape furnished with long soft bristles; the nostrils small, basal, lateral, and concealed by small and numerous bristles. *Wings* reaching to the middle of the tail, rather acute, with the first three quills graduated, and the fourth and fifth equal and longest. *Tail* moderate and equal. *Tarsi* moderate. *Toes* with the inner toe short, and united to the middle one; the claws curved and hooked, that of the hind toe the strongest.

The type is peculiar to Borneo.

A. *clemenciæ* Less. Rev. Zool. 1840. 211.

DICRURUS *Vieill.*†

Bill moderate, with the culmen more or less elevated, keeled, and curved to the tip, which is emarginated, the lateral margins curved, the gonys lengthened and slightly advancing upwards; the nostrils basal, lateral, rounded, and concealed by the projecting plumes and bristles. *Wings* long, with the first three quills graduated, and the fourth and fifth equal and longest. *Tail* long and forked; in some species with the outermost feathers prolonged, and webbed only at their ends. *Tarsi* very short, longer than the middle toe, and covered with transverse scales. *Toes* moderate, the lateral ones unequal, and both united at the base, especially the outer, which is united as far as the second joint; the hind toe as long as the middle one, strong, and armed with a strong curved claw.

These birds are inhabitants of India and its Archipelago, and the continent of Africa. They are usually seen singly, in pairs, or in small parties, perched on some elevated spot, or on the backs of cattle while grazing. From these stations they watch for passing insects, and, when they observe one, give rapid chase after it, sometimes returning to the same perch to await the approach of others. Some are said to hunt in small parties, though at a short distance from each other; others fly from tree to tree at a great elevation, forming swoops after insects in their progress. They show great courage in attacking birds far superior to themselves in size, and the great speed of their flight enables them to attack and retreat with ease and safety. Some species, when about to seek a fresh locality, congregate in hundreds during the evening, and all roost together in bamboo and other thick jungles previously to their departure. All kinds of insects form the food of these birds. The nest is generally placed in the fork of a tree; it is composed of twigs and roots carelessly put together, and not lined interiorly. The female lays about three eggs.

1. D. *malabaricus* (Scop.) Sonn. Voy. t. 111. — Edolius rangoonensis *Gould*, Jard. & Selby's Ill. Orn. n. s. pl. 38.; Dicrurus retifer *Jerd.*

2. D. *paradiseus* (Linn.) — Edolius retifer *Temm.*; Edolius cristatellus *Blyth*; Ed. intermedius *Less.*

3. D. *grandis* (Gould), Proc. Z. S. 1836. 5. — Lanius malabaricus *Lath.* Syn. pl. 108.; Dicrurus platurus *Vieill.*; Chibia malabaricus *Hodgs.*

4. D. *megarhynchus* (Quoy & Gaim.) Voy. de l'Astrol. Zool. 1. p. 184. Ois. t. 6.

5. D. *forficatus* (Linn.) — Pl. enl. 189., Le Vaill. Ois. d'Afr. t. 166. — Dicrurus cristatus *Vieill.*; Lanius Drongo *Shaw*; Muscicapa galeata *Bodd.*

6. D. *balicassius* (Linn.) Vieill. Pl. enl. 603. — Oriolus furcatus *Gmel.*; Dicrurus affinis *Blyth*; Dicrurus annectans *Hodgs.*; Corvus afer *Licht.*; Corvus assimilis *Bechst.*

7. D. *lophorinus* Vieill. N. Dict. Hist. Nat. ix. 587., Le Vaill. Ois. d'Afr. t. 173.

8. D. *cærulescens* (Linn.) Vieill. Edwards's Birds, pl. 56. — Lanius Fingah *Shaw*, Le Vaill. Ois. d'Afr. t. 172.?

* Established by M. Lesson in 1840 (*Rev. Zool.* p. 211.).

† In 1816, Vieillot (*Analyse*, p. 41.) established the above name; and Cuvier, in 1817, proposed *Edolius* for this division. *Bhuchanga* (1837) of Mr. Hodgson is synonymous.

9. D. *leucogaster* Vieill. N. Dict. Hist. Nat. ix. 587., Le Vaill. Ois. d'Afr. t. 171. — Dicrurus albiventer *Steph.*

10. D. *leucophæus* Vieill. N. Dict. Hist. Nat. ix. 587., Le Vaill. Ois. d'Afr. t. 170. — Dicrurus ceylonensis *Steph.*

11. D. *cinerascens* Horsf. Linn. Trans. xiii. 145.

12. D. *macrocercus* Vieill. N. Dict. Hist. Nat. ix. 588., Le Vaill. Ois. d'Afr. t. 174. — Muscicapa biloba *Licht.*; Dicrurus indicus *Steph.*; D. Fingah *Blyth*; D. balicassius *of Ind. Orn.*; D. albirictus *Hodgs.*

13. D. *bracteatus* Gould, Proc. Z. S. — Dicrurus balicassius *Vig. & Horsf.*

14. D. *viridescens* Gould, Proc. Z. S. 1836. 6.

15. D. *musicus* Vieill. N. Dict. Hist. Nat. ix. 586., Le Vaill. Ois. d'Afr. t. 167, 168. — Muscicapa emarginata *Licht.*

16. D. *mystaceus* Vieill. N. Dict. Hist. Nat. ix. 583., Le Vaill. Ois. d'Afr. t. 169. — Muscicapa divaricata *Licht.*

17. D. *lugubris* (Ehrenb.) Sym. Phys. t. 8. f. 3.

18. D. *Ludwigii* Smith, Ill. S. Afr. Zool. Birds, pl. 34.

19. D. *canipennis* Swains. B. of W. Afr. 1. 254.

20. D. *atripennis* Swains. B. of W. Afr. 1. 256.

21. D. *indicus* Hodgs. As. Res. xviii. pl.

22. ? D. *cærulescens* Blyth.

Chibia *Hodgs.**

Bill long, both mandibles curved downwards towards the tips, the culmen elevated and keeled, the sides sloping towards the margins, the base broad, and the sides gradually compressed towards the point which is slightly emarginated; the nostrils basal, lateral, and covered with short plumes and bristles. *Wings* long, with the fourth and fifth quills equal and longest. *Tail* lengthened; the outer feather on each side curled at the end. *Tarsi* short and strongly scutellated. *Toes* short, strong, and strongly scutellated; the hind toe very strong, and equal in length to the middle one.

The type is peculiar to the continent of India; and its habits have not yet been noticed by naturalists.

C. *hottentottus* (Linn.) Strickl. — Edolius barbatus *Gray*; E. Crishna *Gould*; Criniger splendens *Tick.*; Chibia easia *Hodgs.*

Bhringa *Hodgs.*†

Bill moderate, broad, and slightly depressed at the base; the culmen keeled and curved to the tip, which is emarginated; the lateral margins nearly straight, except at the point, which is suddenly hooked; the nostrils and the basal half of the bill concealed by the projecting plumes and bristles. The other characters like those of *Dicrurus*.

It is in various parts of India that this species has been found, and its habits are very similar to those of *Dicrurus*.

B. *remifer* (Temm.) Pl. col. 178. — Edolius malabaricus *Horsf.* ?; Bhringa tectirostris *Hodgs.*

Chaptia *Hodgs.*‡

Bill moderate, broad and depressed at the base; the culmen gradually curved to the tip, which is emarginated; the lateral margins nearly straight, except at the point, which is hooked; the nostrils basal, lateral, and concealed by the projecting plumes and bristles. The remaining characters are similar to those of *Dicrurus*.

* Established by Mr. Hodgson in 1837 (*Indian Review*). The name was changed in 1841 by the same gentleman to *Cometes*. *Criniger* of Mr. Tickell (183) is coequal.

† It was in 1837 that Mr. Hodgson established this subgenus (*Indian Review*).

‡ Mr Hodgson established this subgenus in 1837 (*Indian Review*).

This species is found in various parts of India. It is generally observed in small parties in the most dense and lofty jungles, "where," says Mr. Jerdon, "it stations itself near the top of some lofty tree, whence it makes frequent short sallies after insects, exactly like the flycatcher, and returns generally to the same branch. It sings most charmingly, being only surpassed by the *Gryllivora longicauda*. Its food consists of various insects, both hard and soft winged." It is found on elevated ground, even at an elevation of 4000 feet.

C. *ænea* (Vieill.) N. Dict. Hist. Nat. ix. 586., Le Vaill. Ois. d'Afr. t. 176. — Dicrurus æratus *Steph.*; Chaptia muscipetoïdes *Hodgs.*

Melænornis.*

Bill short, with the culmen elevated, keeled, and curved to the tip, which is emarginated, the base broad, and the sides compressed towards the point; the nostrils basal, lateral, rounded, and partly concealed by a few weak bristles. *Wings* moderate, with the fourth, fifth, and sixth quills equal and longest. *Tail* long, and rounded at its end. *Tarsi* longer than the middle toe. *Toes* moderate, with the outer toe as long as the inner one; the hind toe strong, shorter than the middle one, and armed with a strong claw.

The type of this division is peculiar to Western Africa. Its habits and manners have not yet been recorded.

M. *edolioïdes* (Swains.) Birds of W. Afr. i. 257. pl. 29.

Irena *Horsf.*†

Bill long, strong, with the culmen elevated and much arched from the base to the tip, which is hooked and emarginated; the sides compressed; the nostrils basal, lateral, rounded, and covered with rigid bristles and plumes. *Wings* moderate, with the first quill very short, and the third to the sixth nearly equal and longest. *Tail* moderate, and even at its end. *Tarsi* shorter than the middle toe, and covered with transverse scales. *Toes* rather short, the lateral ones unequal, and the outer one united at its base; the claws small, curved, and weak.

These birds are found in the thickest forests and jungles of the continent of India and its Archipelago, especially those that are situated on elevated ground. They are usually seen in small parties of few individuals, or in pairs, on the most lofty trees, near their summits, seeking insects, and occasionally seizing them on the wing as they endeavour to escape; at other times picking them from the bark of the trees. Various fruits and berries, also, form a portion of their food. "The typical species," says Mr. Jerdon, "has a loud mellow warble, that is frequently heard repeated, by which its presence is detected in the thick and umbrageous parts of the forest they inhabit."

1. I. *puella* (Lath.) Horsf. Zool. Res. pl.

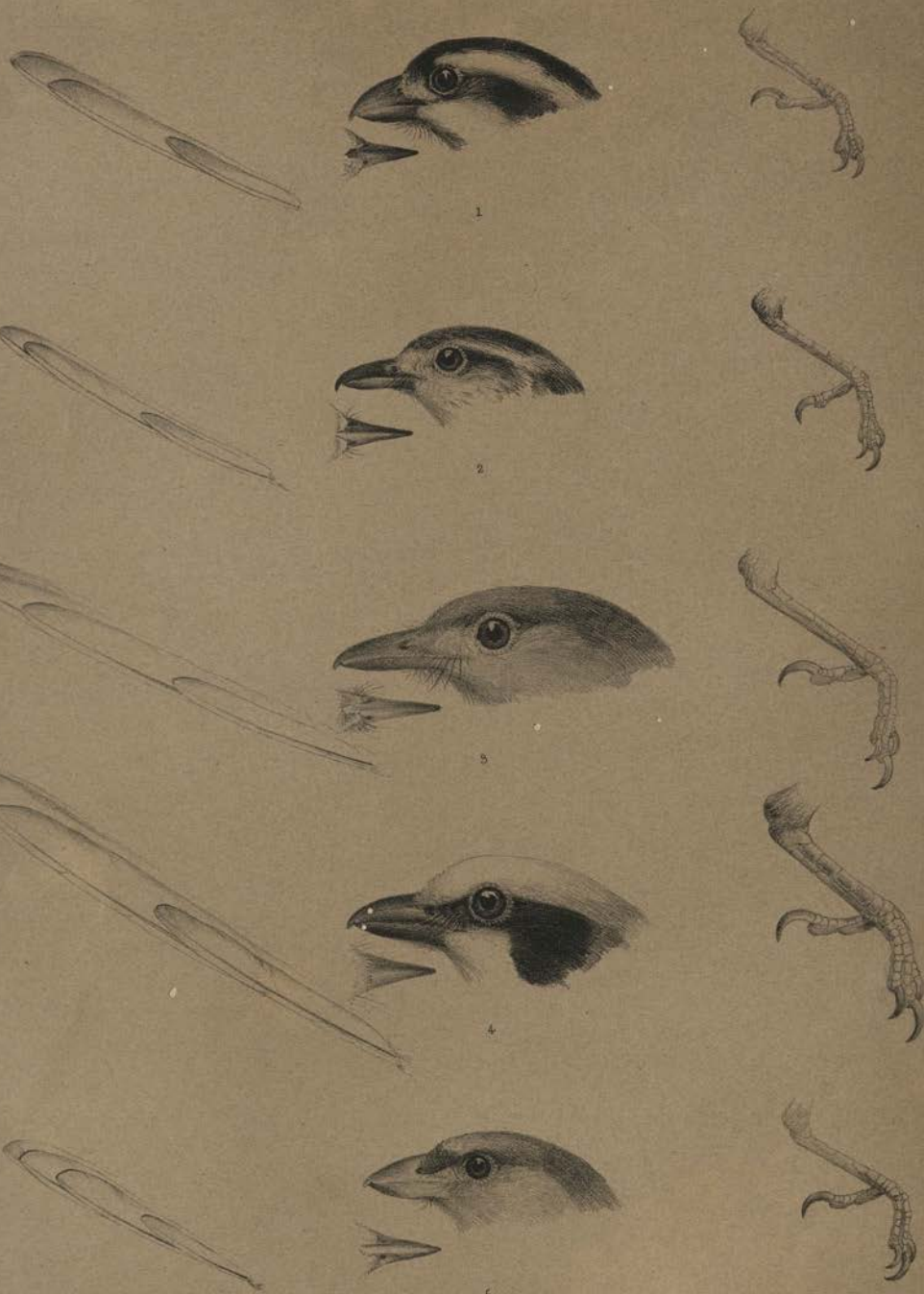
2. I. *cyanogaster* Vigors, Proc. Z. S. 1831. 97.

* This genus was originally established by Mr. Swainson under the name of *Melasoma* (1837), which word, having been previously employed, was changed to the above by me in 1840.

† Dr. Horsfield established this genus in 1820 (*Linn. Trans.* xiii. p. 153.).

Hullmandel & Walton Lithographers.

LANIUS
nigriceps (Frankl.)



1 FALCUNCULUS frontatus. 2. NILAUS capensis. 3. COLLURIOCINCLA harmonica.
4. EUROCEPHALUS anguitimens. 5 CYCLORHIS guianensis.

6 TEPHRODORNIS indica. 7 OREOICA cristata. 8 TELEOPHORUS erythropterus
9 PRIONOPS pohocephalus 10 LANIUS excubitor. 11 ENNEOCTONUS collurio (Wing)

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The fifth Family,

LANIIDÆ, or Butcher-Birds,

have the Bill more or less long, strong, and straight; with the culmen curved, and the sides compressed to the tip, which is generally hooked and emarginated; the gonys long and ascending; the gape sometimes furnished with short bristles: the Wings moderate, and rounded, or pointed: the Tail more or less lengthened, and usually rounded: the Tarsi strong, and more or less long: the Toes moderate; with the hind toe long, and broadly padded beneath: the Claws long, curved, and very acute.

The first Subfamily,

LANIINÆ, or Butcher-Birds,

have the Bill moderate and strong; with the culmen curved, and the sides generally much compressed near the tip, which is mostly hooked and emarginated; the gape sometimes furnished with short bristles; the Nostrils lateral, and rounded: the Wings more or less long, and generally rounded: the Tail of various lengths, and usually rounded: the Tarsi rather short, and strong: the Toes rather long and strong, with the lateral ones generally unequal; the outer toe the longest, and united at its base; the hind toe long, and broadly padded.

Tephrodornis *Swains.**

Bill moderate, generally straight, with the culmen curved, and the sides compressed to the tip, which is hooked and emarginated; the gonys long and ascending; the gape furnished with rather long, slender, bristles; the nostrils basal and lateral, with the opening rounded and concealed by the projecting bristles. *Wings* moderate and rounded; with the fourth and fifth quills equal and longest. *Tail* moderate and emarginated. *Tarsi* longer than the middle toe, strong, and covered in front with broad transverse scales. *Toes* moderate; with the outer toe longer than the inner one, and slightly united at its base; the hind toe long, and broadly padded; the claws long, compressed, slightly curved, and acute.

* Mr. Swainson established this genus in 1831 (*Fauna Boreali-Americana*, p. 482.). *Keroula* of Mr. Gray (1833–34) and *Tenthera* of Mr. Hodgson (1837) are synonymous. This latter name was changed by its proposer to *Creurgus* in 1841.

These birds are found in India, its archipelago, and Africa (?). They are generally seen singly or in small flocks in the forests or open jungles, slowly climbing and hopping about the branches of trees, examining among the foliage for coleopterous and orthopterous insects, and the larvæ of the other orders. They will also at times make a swoop after an insect that flies within a short distance of the branch on which the bird may be perched.

1. T. *indica* (Gray), Ill. Ind. Zool. pl. 33. f. 1, 2. — Lanius muscicapoides *Frankl* ; Tephrodornis superciliosa *Swains.* ; Lanius sordidus *Less.* ; Tephrodornis leucura *Hodgs.*
2. T. *pelvica* Hodgs. — Tephrodornis sylvicola *Jerd.*
3. T. ? *erythropygia* Jerd. Madr. Journ. 1840. p. 17.
4. T. *hirundinacea* (Temm.) Swains. Pl. col. 119.
5. T. *concolor* Blyth, Journ. As. Soc. Beng. xi. p. 799.
6. T. *griseola* Blyth, Journ. As. Soc. Beng. xii. p. 180.
7. T. *virgata* (Temm.) Swains. Pl. col. 256, f. 1.
8. T. (?) *ocreata* Strickl. Ann. Nat. Hist. xv. p. 129.

LANIUS *Linn.**

Bill more or less long, and broad at the base; with the culmen curved, and the sides much compressed to the tip, which is hooked and strongly emarginated; the gonys long and ascending; the gape furnished with a few short bristles; the nostrils lateral, with the opening rounded and partly hidden by the projecting bristles. *Wings* moderate and rounded, with the fourth quill the longest. *Tail* more or less long, narrowed, and graduated. *Tarsi* rather longer than the middle toe, strong, and covered in front with broad scales. *Toes* moderate, with the lateral ones nearly equal; the outer slightly united at the base; the hind toe long, and broadly padded; the claws moderate, curved, and acute.

The species of this genus are found throughout Europe, Asia, and some portions of Africa. They are usually seen singly or in pairs in woody or bushy places. Their food consists of various kinds of insects, which they generally seize on the ground, or from among the foliage, and even occasionally pursue while on the wing. They also attack lizards, small birds, and quadrupeds; these they destroy by strangulation. When the life is extinct, they fix their prey on a thorn, while engaged in feeding on it. Their courage is very great, and prompts them to attack birds of far superior size, should they approach their haunts. Their flight is undulating, usually performed by jerks, and while perched on a branch the tail is in continual motion. The nest is placed in trees or bushes, and is composed of moss, wool, and dry grass, lined internally with hair. The eggs are usually five to seven in number.

1. L. *excubitor* Linn. Gould, B. of Eur. pl. 66.
2. L. *major* Pall. Zoogr. i. p. 401., Pl. enl. 445.
3. L. *algeriensis* Less. Rev. Zool. 1839. p. 134.
4. L. *meridionalis* Temm. Man. d'Orn. i. p. 143.
5. L. *septentrionalis* Gmel. — Lanius excubitor *Wils.* Audub. B. of Amer. pl. 192.
6. ? L. *borealis* Vieill. Ois. d'Amér. Sept. t. 50., Wils. Amer. Orn. pl. 5. f. 1.
7. L. *excubitorides* Swains. Faun. Bor. Amer. ii. p. 115. pl. 34.
8. L. *elegans* Swains. Faun. Bor. Amer. ii. p. 122.
9. L. *ludovicianus* Linn. Faun. Bor. Amer. ii. pl. 34. — Lanius carolinensis *Wils.* Amer. Orn. pl. 22, f. 5. ; L. ardesianus *Vieill.* Ois. d'Amér. Sept. t. 51., Audub. B. of Amer. p. 57.
10. L. *lahtora* Sykes, Proc. Z. S. 1832. p. 86., Gray, Ill. Ind. Zool. pl. 32. f. 1, 2. — Lanius excubitor *Frankl.* ; L. magnirostris *Less.*
11. L. *minor* Gmel. Pl. enl. 32. f. 1. — Lanius vigil *Pall.* ; L. italicus *Lath.* Gould, B. of Eur. pl. 68.
12. L. *schach* Linn. — Lanius chinensis *Gray.*
13. L. *nigriceps* Frankl. Proc. Z. S. 1831. p. 117. — Collurio tricolor *Hodgs.* ; Lanius nasutus *Scop.* ? Sonn. Voy. t. 70. ? ; L. antiguanus *Gmel.* ?
14. L. *erythronotus* (Vigors), Proc. Z. S. 1831. p. 42., Gould, Cent. of Birds, pl. 12. f. 2. — Lanius superciliosus *Swains.* ; L. jounotus *Hodgs.*
15. L. *tephronotus* (Vigors), Proc. Z. S. 1831. p. 43. — Collurio nipalensis et C. obscurior *Hodgs.*
16. L. *bentet* Horsf. Linn. Trans. xiii. p. 144., Less. Cent. t. 72. — Lanius pyrrhonotus *Vieill.* Gal. des Ois. t. 135.
17. L. *pendens* Lath. Levaill. Ois. d'Afr. t. 66. f. 1.
18. L. *Hardwickii* Vigors, Proc. Z. S. 1831. p. 42., Gould, Cent. of Birds, pl. 12. f. 1.

* Linnæus established this genus in 1756. *Collyrio* of Mœhring (1752) is synonymous. It embraces *Corvinella* of M. Lesson (1831), and *Basanistes* of Prof. Lichtenstein (1842).

19. L. *collaris* Linn. Pl. enl. 477. f. 1., Levaill. Ois. d'Afr. t. 61, 62., Jard. & Selby, Ill. Orn. pl. 52, 53.
20. L. *afer* Lath. — Lanius signatus *Shaw.*
21. L. *subcoronatus* A. Smith, Ill. S. Afr. Zool. Birds, pl.
22. L. *nubicus* Licht. — L. personatus *Temm.* Pl. col. 216. f. 2.; Lanius leucometopon *V. de Mulhe.*
23. L. *Smithii* (Fras.) Proc. Z. S. 1843, p. 16.
24. L. *strigatus* Eyton, Proc. Z. S. 1832. p. 103.
25. L. *corvinus* Shaw, Levaill. Ois. d'Afr. t. 78. — Lanius cissoïdes *Vieill.*; L. mellivorus *Licht.*; Type of Corvinella *Less.*
26. L. *cissoïdes* Licht. — Lanius melanoleucus *A. Smith*, Jard. & Selby, Ill. Orn. pl. 117., Mag. de Zool. 18 , Ois. t. 61.; Type of Basanistes *Licht.*
27. L. *acuticaudatus* Vieill. N. Dict. d'Hist. Nat. xxvi. p. 134.
28. L. *ruber* Scop. Sonn. Voy. t. 71. — Lanius panayensis *Gmel.*
29. L. *albus* Scop. Sonn. Voy. t. 71.
30. L. *dubius* Lath.
31. L. *pacificus* Gmel.
32. L. *tabuensis* Gmel.
33. L. (?) *striatus* (Gmel.) Wagl. Lath. Syn. pl. 16.
34. L. *humeralis* Stanl. Salt's Trav. App. p. 51.

Enneoctonus *Boie.**

Wings moderate, and rather pointed, with the third quill the longest. *Tail* moderate, and much rounded. The other characters like those of Lanius.

This division embraces species that are found in Europe and India. Their habits and manners are very similar to those of the former genus, except that they seem chiefly to live on various kinds of insects, and rarely if ever attack small birds.

1. E. *collurio* (Linn.) Pl. enl. 31. — Lanius æruginosus *Kl.*; L. spinitorques *Bechst.* Gould, B. of Eur. pl. 69., Levaill. Ois. d'Afr. t. 64.
2. E. *rufus* (Briss.) Pl. enl. 9. f. 2. — Lanius ruficeps *Bechst.*; L. pomeranus *Sparrm.* Mus. Carls. t. 1.; L. rutilus *Lath.*; L. ruficollis *Shaw*, Levaill. Ois. d'Afr. t. 63., Gould, B. of Eur. pl. 70.; Type of Phoneus *Kaup* (1829).
3. E. *phœnicurus* (Pall.) Zoogr. i. p. 405.
4. E. *lucionensis* (Linn.) Briss. Orn. i. p. 169. t. 18. f. 1. — Lanius cristatus *Linn.* Edwards's Birds, pl. 54.; L. melanotis *Valene.*; L. collurioides *Less.*; Collurio ferrugiceps *Hodgs.*
5. E. *bucephalus* (Temm. & Schl.) Faun. Jap. t. 14.
6. E. *superciliosus* (Lath.) Levaill. Ois. d'Afr. t. 66. f. 2.

Nilaus *Swains.*†

Bill long and strong; with the culmen and the sides compressed near the tip, which is hooked and emarginated; the gonys long, and curved upwards; the gape furnished with short weak bristles; the nostrils lateral, with the opening exposed and partly closed by a membrane. *Wings* long, and rather rounded; with the third, fourth, and fifth quills equal and longest. *Tail* short, and emarginated. *Tarsi* much longer than the middle toe, and covered in front with broad transverse scales. *Toes* short, and rather strong; with the outer toe longer than the inner, and very slightly united at its base; the hind toe long, and broadly padded; the claws long, curved, and acute.

The typical species of this genus is found in the southern and northern portions of Africa. It appears to migrate from place to place, in flocks of few individuals; and, when it takes to a locality, it is usually observed flitting about the branches of the trees that grow on the margins of the rivers, searching for insects both in their perfect and imperfect states. The nest is formed of moss and fine roots, lined internally with wool and feathers. The eggs are usually five in number.

N. *capensis* (Shaw), Swains. Levaill. Ois. d'Afr. t. 71. — Lanius brubru *Lath.*; L. frontalis *Forst.*

* M. Boie established this genus in 1826 (*Isis*). It embraces *Phoneus* of Dr. Kaup (1829).
† It was in 1827 that Mr. Swainson established this genus (*Zool. Journ.* p. 162.).

Prionops *Vieill.**

Bill moderate and straight, with the culmen and the sides much compressed near the tip, which is hooked and emarginated; the gonys long, and curved upwards; the lateral margins straight; the nostrils lateral, with the opening rounded and partly concealed by the projecting feathers. *Wings* long, and rather pointed; with the third and fourth quills equal and longest. *Tail* long and rounded. *Tarsi* as long as the middle toe, strong, and covered in front with transverse broad scales. *Toes* moderate; with the outer toe longer than the inner, and slightly united at the base; the hind toe long, and broadly padded beneath; the claws long, compressed, and much curved.

The species that compose this genus are found in most parts of Africa. They are generally seen among low bushes, in flocks of six or eight individuals, and either actively engaged in traversing those bushes, or in exploring the ground around them in search of insects, especially termites. They are shy and noisy; and, when one of the flock is induced to fly, all the others follow the example, and thus wing their way to a fresh locality.

1. P. *plumatus* (Shaw), Swains. Levaill. Ois. d'Afr. t. 80, 81.— Prionops Geoffroyii *Vieill.* Gal. des Ois. t. 142.
2. P. *talacoma* A. Smith, Ill. Zool. S. Afr. Birds, pl. 5.
3. P. *poliocephalus* (Stanl.) Salt's Trav. App. p. 50. — Prionops cristatus *Rüpp.* Faun. t. 12. f. 2.

Telophorus *Swains.*†

Bill more or less long, with the culmen curved, and the sides much compressed to the tip, which is hooked and emarginated; the gonys long, and curved upwards; the gape furnished with a few bristles; the nostrils lateral, with the opening rounded and partly exposed. *Wings* rather short, and rounded; with the third, fourth, and fifth quills equal and longest. *Tail* long and rounded. *Tarsi* longer than the middle toe, strong, and covered in front with transverse scales. *Toes* long; with the outer toe rather longer than the inner, and slightly united at its base; the hind toe long and strong; the claws moderate, slightly curved, and acute.

These birds inhabit Africa and India. They flit about with great celerity from twig to twig and from bush to bush in search of their food, which consists of various kinds of insects. The nest is formed in the bushes, and the female deposits five eggs.

1. T. *erythropterus* (Shaw), Swains. Levaill. Ois. d'Afr. t. 70., Pl. enl. 479. f. 1. — Lanius coronatus *Vieill.*
2. T. *longirostris* Swains. Two Cent. and a Quart. p. 282.
3. T. *cucullatus* (Temm.) Pl. enl. 297. f. 1. — Lanius senegalus var. *Lath.*
4. T. *senegalus* (Linn.) Briss. Orn. ii. t. 17. f. 1.
5. T. *trivirgatus* A. Smith, Ill. Zool. S. Afr. Birds, pl.
6. T. *zeylonus* (Linn.) Pl. enl. 272., Edwards's Birds, pl. 321., Levaill. Ois. d'Afr. t. 67. — Laniarius Bacbakiri *Vieill.*; Lanius ornatus *Licht.*; Telophorus collaris *Swains.*
7. T. *leucogrammicus* (Temm.) Swains. — Crocias guttatus *Temm.* Pl. col. 592.; Lanius albonotatus *Less.*; Type of Laniellus *Swains.* (1831).

* Vieillot established this genus in 1816 (*Analyse, &c.* p. 41.).
† Mr. Swainson established this genus in 1831 (*Fauna Bor. Amer.* p. 481.). It embraces *Laniellus* of Mr. Swainson (1831), with which *Crocias* is synonymous.

Eurocephalus *A. Smith.**

Bill strong and short, with the culmen curved, and the sides compressed to the tip, which is slightly emarginated; the gonys long and ascending; the gape furnished with a few short bristles; the nostrils basal, with the opening oval and covered by the projecting frontal plumes. *Wings* long and pointed, with the third quill the longest. *Tail* long and rounded. *Tarsi* as long as the middle toe, strong, and covered in front with strong transverse scales. *Toes* short and strong; with the lateral toes nearly equal, and free at their bases; the hind toe moderate, and broadly padded; the claws moderate, curved, and acute.

The species that forms the type of this genus is found both in North and South Africa. It is remarkably shy, and is usually seen in small flocks searching for insects. When one was wounded, its companions continued hovering about and approaching it until it was removed.

E. *anguitimens* A. Smith, Ill. Zool. S. Afr. Birds, pl. ., Rüpp. Syst. Uebers. Vög. &c. t. 27. — Chætoblemma leucocephala *Swains.*

Cyclorhis *Swains.*†

Bill moderate, with the culmen elevated at the base, curved, and much compressed on the sides to the tip, which is emarginated; the gonys long, and curved upwards; the nostrils lateral, with the opening rounded and partly covered by the frontal feathers. *Wings* moderate and rounded; with the fourth, fifth, and sixth quills equal and longest. *Tail* moderate and emarginated. *Tarsi* rather longer than the middle toe, strong, and covered in front with transverse scales. *Toes* moderate; with the outer toe longer than the inner, and slightly united at its base; the hind toe long and strong; the claws moderate, curved, and acute.

It is in the vast forests of the tropical parts of South America that the species of this genus are found.

1. C. *guianensis* (Gmel.) Swains. B. of Br. pl. 58. — Cyclarhis poliocephala *Tschudi.*
2. C. *ochrocephala* Tschudi, Wiegm. Archiv. 1846.
3. C. *flaviventris* De Lafr.
4. C. *nigrirostris* Guer. Mag. de Zool. 1843. t. 33.

Falcunculus *Vieil.*‡

Bill moderate, with the culmen elevated at the base, arched, and the sides much compressed to the tip, which is acute and emarginated; the gonys long, and curved upwards; the nostrils lateral, with the opening

* It was in 1836 that Dr. Smith established this genus.
† Mr. Swainson established this genus in 1824 (*Zool. Journ.* p. 162.). In 1837 M. D'Orbigny changed the name to *Laniagra.*
‡ Vieillot established this genus in 1816 (*Analyse, &c.* p. 40.).

rounded, and concealed by the projecting feathers. *Wings* moderate and rounded; with the third, fourth, and fifth quills nearly equal and longest. *Tail* moderate, emarginated, and rounded on the sides. *Tarsi* longer than the middle toe, and covered in front with transverse scales. *Toes* moderate; with the outer toe longer than the inner, and united at its base; the hind toe long, and broadly padded; the claws moderate, curved, and acute.

The species are peculiar to the vast continent of Australia. They are found both in the thick bushes and on the trees of the open plains. Their food chiefly consists of insects, which are either obtained among the foliage or under the bark of the larger branches and trunks of the trees; in procuring these they display great dexterity, stripping off the bark in the most determined manner, for which purpose their powerful bill is admirably adapted. "It is very animated," says Mr. Gould, speaking of one of the species, "and sprightly in its actions, and in many of its habits bears a striking resemblance to the Tits, particularly in the manner in which it clings to, and climbs about, the branches in search of food: while thus employed it frequently erects its crest, and assumes many pert and lively positions."

1. F. *frontatus* (Lath.) Vieill. Lamb. Icon. ined. i. 49., Lewin's Birds of N. S. W. pl. 26., Pl. col. 77., Gal. des Ois. t. 137.
2. F. *flavigulus* Gould, Proc. Z. S. 1837. p. 144.
3. F. *leucogaster* Gould, Proc. Z. S. 1837. p. 144.
4. F. *erectus* (Lath.) Lamb. Icon. ined. iii. 20.

Oreoica *Gould.**

Bill moderate, with the culmen curved, and the sides compressed to the tip, which is emarginated; the gonys long and ascending; the gape furnished with two or three short weak bristles; the nostrils lateral, with the opening rounded and partly covered by the frontal feathers. *Wings* rather long and rounded, with the fourth quill the longest. *Tail* short, and slightly rounded. *Tarsi* as long as the middle toe, strong, and covered in front with transverse scales. *Toes* short; the inner toe rather shorter than the outer, which is slightly united at its base; the hind toe long, and broadly padded; the claws moderate, nearly straight, and acute.

It is only in Australia that the species which constitutes this genus is found. They are seen in the open places of the forests, and resort much, says Mr. Gould, to the ground, over the surface of which they hop with great quickness, often in small companies of from three to six in number. When flushed they fly but a short distance, generally to a horizontal branch of a neighbouring tree, along which they pass in a succession of quick hops. They are very animated in many of their actions; and their flight is a heavy undulating sweep, generally so near the ground that they seem as if they would scarcely take the trouble to rise above the scrub or small trees that may lie in their course. The note is commenced in so low a tone that it sounds as if at a considerable distance, and then gradually increases in volume until it appears as if over the head of the wondering hearer; the bird that utters it being all the while on the dead branch of a tree, perhaps not more than three or four yards distant, its motionless attitude rendering its discovery very difficult. The nest is cup-shaped, and formed of strings of bark, lined with a few fine dried grasses, and is generally placed on a grass-tree. The female lays usually three eggs.

O. *cristata* (Lewin), G. R. Gray, Lewin, B. of N. S. W. pl. 9.— Falcunculus gutturalis *Vig. & Horsf.* Gould, B. of Austr. pl.

* Mr. Gould established this genus in 1837 (*Proc. Zool. Soc.* 1837, p. 151.).

Colluriocincla *Vig. & Horsf.**

Bill long and straight, with the culmen curved, and the sides compressed to the tip, which is hooked and emarginated; the gonys long and ascending; the gape furnished with short bristles; the nostrils lateral, with the opening rounded and exposed. *Wings* long and rounded, with the fourth and fifth quills equal and longest. *Tail* long and emarginated. *Tarsi* rather longer than the middle toe, and covered in front with broad transverse scales. *Toes* moderate; with the outer toe longer than the inner, and united at the base; the hind toe long, and broadly padded beneath; the claws moderate, compressed, curved, and acute.

The species of this genus are found in most parts of Australia. They are active restless birds, moving about the branches of the trees, seeking for various kinds of insects both in the perfect and larva states. Some of the species possess a pleasing song, which is often uttered while in search of their subsistence. The nest is placed on an exposed branch of a tree, or on a projection of a rock. It is composed of the inner bark of trees and leaves, lined internally with fibrous roots. The eggs are usually three in number.

1. C. *harmonica* (Lath.) Gould, Lamb. Icon. ined. t. 55. — Colluriocincla cinerea *Vig. & Horsf.* Jard. & Selby, Ill. Orn. pl. 71.; Certhia canescens *Lath.* Lamb. Icon. ined. ii. 74.; Lanius saturninus *Nordm.*; Turdus dilutus *Lath.* Lamb. Icon. ined. iii. 33.; Colluriocincla strigata *Swains.* (juv.).
2. C. *rectirostris* Jard. & Selby, Ill. of Orn. n. s. pl. 32.
3. C. *fusca* Gould, Proc. Z. S. 1836. p. 6.
4. C. *brunnea* Gould, Proc. Z. S. 1840. p. 164.
5. C. *rufiventris* Gould, Proc. Z. S. 1840. p. 164.
6. C. *parvula* Gould, Proc. Z. S. 1845. p.

* Established by Vigors and Dr. Horsfield in 1825 (*Linn. Trans.* xv. p. 213.).

February, 1847.

C. Hullmandel's Patent Lithotint.

LANIARIUS
multicolor G. R. Gray

THAMNOPHILINÆ.

Wolf del. et lith.

Printed by Hullmandel & Walton.

ALCOLMSON TESTIM. SC.

1 LANIARIUS gutturalis. 2 THAMNOPHILUS meleagris. 3 CRACTICUS Quoyi.
4 VANGA curvirostris. 5 CHAUNONOSUS Sabinei.

The second Subfamily,

THAMNOPHILINÆ, or BUSH-SHRIKES,

have the Bill more or less lengthened, compressed on the sides, the culmen straight but arched, hooked and emarginated at the tip, the gape more or less bristled; the Nostrils basal, lateral, and mostly rounded; the Wings moderate, and more or less rounded; the Tail usually long and rounded; the Tarsi moderate, and covered with broad scales; the Toes moderate, the lateral ones unequal, and the outer toe united to the middle one at the base.

THAMNOPHILUS *Vieill.**

Bill moderate, strong, compressed on the sides, with the culmen slightly sloping from the base towards the tip, which is abruptly hooked and emarginated; the gonys long and advancing upwards to the tip, which is also emarginated; the nostrils basal, lateral, rounded, and exposed. *Wings* moderate and rounded, with the fourth to the seventh quills the longest. *Tail* more or less lengthened and rounded. *Tarsi* longer than the middle toe, covered before and behind with transverse scales. *Toes* moderate, the lateral toes unequal, the outer united as far as the first joint of the middle toe; the claws moderate, much curved, and acute.

Most of these birds are inhabitants of the tropical parts of America, yet a few of the species extend northwards as far as Canada. They usually reside in the vast forests, searching the foliage of the low bushes, and the trunks of the trees, for the coleopterous and other insects on which they subsist. The nests are usually placed in the thick bushes, at no great distance from the ground: the exterior is attached by strong filaments to the boughs which form a fork, at the extremity of a slender branch; the interior is furnished with hairs and delicate stems of plants. Some species compose it of a series of small spinous branches slightly put together. The eggs are from two to five in number.

1. Th. *doliatus* (Linn.) Pl. enl. 297. f. 2., Edwards's Birds, pl. 226. — Thamnophilus radiatus *Vieill.*; Th. radiosus *Spix*, Av. Bras. t. 35. f. 2. t. 38. f. 1.; Lanius ferrugineus *Act. Par.*; L. rubiginosus *Lath.* Le Vaill. Ois. d'Afr. t. 77. f. 2.

2. Th. *paliatus* (Licht.) Cat. Dupl. Berl. Mus. p. 46. — Thamnophilus lineatus *Spix*, Av. Bras. t. 38. f. 1, 2.; Th. badius *Swains.* B. of Braz. pl. 65, 66.; Lanius vestitus *Cuv.*

3. Th. *fasciatus* Swains. Zool. Journ. ii. 88.

4. Th. *cinnamomeus* Swains. Zool. Journ. ii. 87.

5. Th. *bicolor* Swains. Zool Journ. ii. 86., Ornith. Draw. pl. 60.

6. Th. *undulatus* Mikan, Del. Floræ et Faun. Bras. t. — Thamnophilus striatus *Quoy et Gaim.* Voy. de l'Uranie, Ois. t. 18,19.; Th. Vigorsii *Such*, Zool. Journ. Supp. pl. 7.; Th. cinereus et Th. rufus *Vieill.*; Th. gigas *Swains.*

7. Th. *severus* (Licht.) Cat. Dupl. Berl. Mus. p. 45. — Thamnophilus niger *Such*, Jard. & Selby's Ill. Orn. pl. 21.; Th. Swainsoni *Such.*

8. Th. meleagris (*Licht.*) Cat. Dupl. Berl. Mus. p. 46. — Thamnophilus guttatus *Spix*, Av. Bras. t. 35. f. 1.; Th. maculatus *Such*, Zool. Journ. i. 537. suppl. pl. 6.

9. Th. *Leachii* Such, Zool. Journ. i. 588., Jard. & Selby, Ill. Orn. pl. 41.

10. Th. *stagurus* (Licht.) Cat. Dupl. Berl. Mus. p. 45. — Thamnophilus albiventris *Spix*, Av. Bras. t. 32.; Th. major *Vieill.*

11. Th. *luctuosus* (Licht.) Cat. Dupl. Berl. Mus. p. 47. — Thamnophilus Othello *Less.* Cent. Zool. t. 19.

12. Th. *nævius* (Linn.) Vieill. Le Vaill. Ois. d'Afr. t. 77., Leach, Zool. Misc. pl. 17. — Thamnophilus cærulescens et Th. auratus *Vieill.* Azara No. 214. 213.; Lanius punctatus *Shaw*, Swains. Ornith. Draw. pl. 59.

* Established by Vieillot (*Analyse*, p. 40.) in 1816. In 1831 M. Lesson proposed the name of *Batara* for the same set of birds. It embraces *Cymbilaimus* G. R. Gray (1840).

13. Th. *ambiguus* Swains. Zool. Journ. ii. 91.
14. Th. ———. — Thamnophilus pileatus *Swains.* Zool. Journ. ii. 91.
15. Th. *pileatus* (Lath.).
16. Th. *ruficeps* Such, Zool. Journ. i. 559.
17. Th. *torquatus* Swains. Zool. Journ. ii. 88.
18. Th. *ferrugineus* Swains. Zool. Journ. ii. 92.
19. Th. *aspersiventer* D'Orb. & Lafr. Voy. dans l'Amér. Mér. t. 4. f. 1. 2.
20. Th. *atropileus* D'Orb. & Lafr. Syn. Av. p. 11. — Thamnophilus rutilus *Vieill.* ?
21. Th. *albonotatus* Spix, Av. Bras. t. 38. f. 2.
22. Th. *schistaceus* D'Orb. & Lafr. Voy. dans l'Amér. Mér. t. 4. f. 2.
23. Th. *fuliginosus* Gould, Proc. Z. S. 1837. 80.
24. Th. ———. — Thamnophilus fuligiposus *D'Orb. & Lafr.* Voy. dans l'Amér, Mér. t. 5. f. 1.
25. Th. ———. — Thamnophilus palliatus *Less.* Rev. Zool. 1839. 104.
26. Th. *capistratus* Less. Rev. Zool. 1840. 226.
27. Th. *pectoralis* Swains. Two Cent. and a Quart. p. 283.
28. Th. *albicans* Lafr. Rev. Zool. 1844. 82.
29. Th. *multistriatus* Lafr. Rev. Zool. 1844. 82.
30. Th. *brevirostris* Lafr. Rev. Zool. 1844. 82.
31. Th. ———. — Thamnophilus luctuosus *Tschudi*, Fauna Peruana, p. 18.
32. Th. *cristatus* (Lath. ?) Pr. Max. Beitr. iii. 1002.
33. Th. *maculatus* D'Orb. & Lafr. Syn. Av. p. 11.
34. Th. *canadensis* (Linn.) Pl. enl. 479. f. 2.
35. Th. ——— Briss. Orn. ii. t. 39. f. 4. — Muscicapa canadensis *Linn.* Vieill. Ois. d'Amér. Sept. t. 49.?
36. Th. *cristatellus* Vieill. N. Dict. Hist. Nat. xxxv. 200.
37. Th. *virescens* Vieill. N. Dict. Hist. Nat. xxxv. 319.
38. Th. *ruficapillus* Vieill. N. Dict. Hist. Nat. iii. 318., Azara No. 215.
39. Th. *cyanocephalus* Vieill. N. Dict. Hist. Nat. iii. 318., Azara No. 216.
40. Th. *rubicus* Vieill. N. Dict. Hist. Nat. iii. 316.
41. Th. ———. — Thamnophilus lineatus *Vieill.* N. Dict. Hist. Nat. 3. 316.
42. Th. *guttatus* Vieill. N. Dict. Hist. Nat. iii. 315.
43. Th. *longicaudatus* Vieill. N. Dict. Hist. Nat. iii. 315.
44. Th. *chloropterus* Vieill. N. Dict. Hist. Nat. iii. 310.
45. Th. *viridis* Vieill. N. Dict. Hist. Nat. iii. 318.
46. Th. ———. — Thamnophilus viridis *Vieill.* Encyc. Méth. p. 750.
47. Th. *ruber* (Gmel.).
48. Th. *varius* (Gmel.) Vieill.
49. Th. *aurantius* (Lath.).
50. Th. *niger* (Gmel.).
51. Th. *obscurus* Leach, Zool. Misc. pl. 21.
52. Th. *scapularis* (Licht.) Pr. Max. Beitr. iii. 999.
53. Th. *nigricans* Pr. Max. Beitr. iii. 1006.
54. Th. *lineatus* (Leach), Zool. Misc. pl. 6. — Type of Cymbilaimus *G. R. Gray* (1840).

Lanıarius *Vieill.**

Bill rather slender, straight, much compressed on the sides; the culmen slightly curved to the tip which is slightly hooked and emarginated, the gonys moderate, and advancing upwards to the tip, which is emarginated; the gape furnished with a few short bristles; the nostrils basal, lateral, and rounded. *Wings* moderate and rounded, with the fifth and sixth quills the longest. *Tail* lengthened, and more or less rounded. *Tarsi* longer than the middle toe; covered in front with transverse scales, and on the sides by an entire one. *Toes* lengthened, the lateral ones unequal, and the outer united to the first joint, the hind toe strong, and longer than the outer toe; the claws moderate, arched, and acute.

These birds are found on the continent of Africa, where they frequent the branches of the lofty trees that are located near the rivers. Their chief food is insects, regardless of their states, which they search for on the branches or among the foliage. The larger species are said to attack young and sickly birds, and some feed on fruits and berries. The nests are hidden in the bushes or in the trees that border the rivers, and are composed of moss and stems of plants. The eggs are usually from four to five in number.

1. L. *barbarus* (Linn.) Vieill. Pl. enl. 56., Le Vaill. Ois. d'Afr. t. 69., Swains. Zool. Illustr. n. s. pl. 71.
2. L. *atrococcineus* (Burch.) Zool. Journ. i. 461. pl. 28., Swains. Zool. Illustr. n. s. pl. 72.
3. L. *cruentatus* (Rüpp.) Rüpp. Zool. Atlas, pl. 29., Ehrenb. Symb. Phys. Aves, t. 3. — Malaconotus roseus *Jard. & Selby*, Ill. Orn. n. s. pl. 30.; M. erythrogaster *Swains.*
4. L. *olivaceus* (Shaw), Vieill. Le Vaill. Ois. d'Afr. t. 75, 76. f. 1. — Lanius oleagineus *Licht.*
5. L. *similis* (Smith). — Malaconotus chrysogaster *Swains.* B. of W. Afr. pl. 25.; M. aurantiopectus *Less.*
6. L. *leucotis* (Swains.) Two Cent. and a Quart. p. 341.
7. L. *superciliosus* (Swains.) B. of W. Afr. i. 239.
8. L. *gutturalis* (Daud.) Le Vaill. Ois. d'Afr. t. 286. — Mala-

* Established by Vieillot (*Analyse*, p. 41.) in 1816. In 1824 Mr. Swainson proposed *Malaconotus*, and in 1826 M. Boie used *Pelicinius* for this section. It embraces *Dryoscopus* of M. Boie (1826), with which my *Hapalophus* (1837) is coequal.

conotus torquatus *Swains.* Shaw, Zool. Misc. pl. 687.; Laniarius viridis *Vieill.* Gal. des Ois. t. 143.

9. L. *erythrogaster* (Bodd.) Pl. enl. 358. — Turdus chrysogaster *Gmel.*

10. L. *icterus* (Cuv.) Le Vaill. Ois. d'Afr. t. 285. — Lanius olivaceus *Vieill.* Gal. des Ois. t. 139.; Malaconotus Blanchoti *Steph.* Swains. B. of W. Afr. pl. 22.; Lanius poliocephalus *Licht.*

11. ———. — Lanius cruentus *Less.* Cent. Zool. t. 65.

12. L. *rubigaster* Vieill. N. Dict. Hist. Nat. xiii. 300.

13. L. *mystaceus* (Lath.) Le Vaill. Ois. d'Afr. t. 65.

14. L. *multicolor* G. R. Gray.

15. L. *hypopyrrhus* (Hartl.) Syst. Verz. Mus. Brem. p. 61.

16. L. *cubla* (Shaw), Le Vaill. Ois. d'Afr. t. 72. — Type of Dryoscopus *Boie* (1826).

17. L. *gambensis* (Licht.) Cat. Dupl. Mus. Berl. p. 48. — Malaconotus mollissimus *Swains.* B. of W. Afr pl. 23.

18. L. *affinis* G. R. Gray; Mag. of Nat. Hist. 1837. 489.

19. L. *orientalis* (Swains.) Two Cent. and a Quart. p. 342. — Malaconotus similis *Swains.*

20. L. *boulboul* (Lath.) Le Vaill. Ois. d'Afr. t. 68. — Malaconotus rufiventris *Swains.*; Turdus æthiopicus *Lath.*

21. L. *madagascariensis* (Linn.) Pl. enl. — Lanius bicolor *Lath.* Le Vaill. Ois. d'Afr. t. 73.

22. L. *silens* (Shaw), Le Vaill. pl. 74.

Vanga.*

Bill as long as the head, strong, straight, and much compressed on the sides, with the culmen rather keeled, and slightly sloping from the base towards the tip, which is abruptly hooked and strongly emarginated; the gonys lengthened, and advancing upwards to the tip, which is emarginated; the nostrils lateral, basal, rounded, and partly concealed by plumes and bristles; the gape furnished with long bristles. *Wings* moderate and rounded, with the fourth, fifth, and sixth quills nearly equal and longest. *Tail* rather long and rounded. *Tarsi* longer than the middle toe; covered in front with transverse scales, and on the sides with an entire scale. *Toes* moderate, slender, the lateral ones unequal, the outer toe united to the middle one beyond the first joint, the hind toe nearly as long as the middle one and strong; the claws long, much arched, and acute.

The type is found in Madagascar and the southern parts of Africa. Its habits and manners are unknown.

V. *curvirostris* (Linn.) Pl. enl. 228. — Thamnophilus leucocephalus *Vieill.*

Chaunonotus.†

Bill longer than the head, broad at the base and compressed towards the tip, which is scarcely emarginated; the culmen broad, rounded, smooth, and advancing on the forehead, with the basal portion rounded; the nostrils lateral, near the middle of the bill, oblong, and exposed, with the frontal plumes advancing to the opening. *Wings* short and rather rounded, with the first three quills graduated, and the fourth to the sixth nearly equal and longest. *Tail* moderate and slightly rounded. *Tarsi* much longer than the middle toe, slender, and covered with broad transverse scales. *Toes* short, slender, the lateral ones nearly equal, with the outer one united at its base; the hind toe long and strong; and all armed with short curved claws.

The type is peculiar to the western portions of the continent of Africa. Its habits and manners have not been recorded by naturalists.

C. *Sabinei* (Gray), Mag. of Nat. Hist. ix. p. 489. with figure of head, Jard. & Selby's Ill. of Orn. n. s. pl. 27.

* Established by Vieillot in 1816 (*Analyse*, p. 41.).

† This genus was established by me in 1837 (*Mag. of Nat. Hist.* ix. 489.).

Cracticus *Vieill.**

Bill lengthened, straight, broad at the base, and narrowing towards the tip, which is hooked and emarginated; the culmen broad, advancing on the forehead, rounded, and smooth; the gape furnished with slender long bristles; the nostrils basal, lateral, and pierced in the substance of the bill. *Wings* long and pointed, with the first three quills graduated, and the fourth and fifth equal and longest. *Tail* long and rounded. *Tarsi* rather longer than the middle toe. *Toes* moderate, the lateral ones unequal, the outer longest and united at its base; the claws long, curved, and acute.

The species of this genus are found in New Guinea and the continent of Australia.

1. C. *cassicus* (Bodd.) Pl. enl. 628. — Coracias varius *Gmel.*; Barita Sonneratii *Less.* Shaw, Nat. Misc. pl. 781.
2. C. *torquatus* (Lath.) Lamb. Icon. ined. iii. 32. — Vanga destructor *Temm.* Pl. col. 273., Gould, Syn. B. of Austr. pl. f. 1. (head).
3. C. *melanoleucus* (Lath.) Vieill. Lamb. Icon. ined. ii. 33.
4. C. *nigrogularis* (Gould), Proc. Z. S. 1830. 143., Gould, Syn. Birds of Australia, pl. f. 2. (head). — Cracticus varius *Vigors & Horsf.*
5. C. *cinereus* (Gould), Proc. Z. S. 1836. 143., Syn. B. of Austr. pl. (head).
6. C. *argenteus* Gould, Proc. Z. S. 1840. 126.
7. C. *gymnocephalus* (Temm.) Pl. col. 572. — Type of Pityriasis *Lesson* (1837).

* Established by Vieillot (*Analyse*, p. 37.) in 1816. Cuvier in 1817 proposed *Barita* for these birds. It embraces *Pityriasis* of M. Lesson (1837).

August, 1845.

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